DUCA

INTERNATIONAL UNDERSTANDING

By AUGUSTUS O. THOMAS

A GEOGRAPHER'S VIEW OF AMERICAN QUEERNESS

By ELLSWORTH HUNTINGTON

SOCIAL STUDIES—OR GEOGRAPHY AND HISTORY?

By EDWIN E. SLOSSON

COLLEGE GEOGRAPHY

By NILS A. HOLGERSON

VISUAL INSTRUCTION IN NEW YORK

By A. W. A

GEOGRAPHY TEXTS BEFORE 1800

By GE

YOUR SCHOOLS AND MINE

By ROY O.

EDUCATION

EDITOR-IN-CHIEF

HERBERT BLAIR
Professor of School Administration
Boston University School of Education

ASSOCIATE EDITORS

ARITHMETIC
GUY M. WILSON
Professor of Education
Boston University

ART
ROYAL BAILEY FARNUM
Director
Rhode Island School of Design

CIVICS
FRANK BEXFORD
Director of Civics
New York City

COMMERCIAL
FREDERICK G. NICHOLS
Professor of Commercial Education
Harvard Univ. School of Education

CREATIVE WRITING
TRENTWELL MASON WHITE
Lecturer in Creative Writing
Breadloaf School of English
Middlebury College

ELEMENTARY EDUCATION
AMY BRONSKY
Assistant Professor of Elementary
Education, Ohio State University

ENGLISH
EVERETT GETCHELL
Professor of Education
Boston University

EXTRA CURRICULAR ACTIVITIES
EDWARD J. BATON
Professor of Education
Boston University

GEOGRAPHY
DOUGLAS C. RIDGLEY
Professor of Geography in Education
Clark University

GUIDANCE
JESSE B. DAVIS
Professor of Education
Boston University

HISTORY
DANIEL C. KNOWLTON
Professor of Education
New York University

HOME ECONOMICS
GLADYS B. JONES
Director, Garland School of
Home Making, Boston

HEALTH EDUCATION
MABEL C. BRAGG
Associate Professor of Education
Boston University

INDUSTRIAL ARTS
ARTHUR B. MAYS
Professor of Industrial Education
University of Illinois

MEASUREMENT
ERNEST W. TIEGS
Dean of University College
University of Southern California

PHYSICAL EDUCATION
FREDERICK RAND ROGERS
Dean of Physical Education and Health
Boston University

PUBLIC RELATIONS
M. R. KEYWORTH
Superintendent of Schools
Hamtramck, Michigan

SCIENCE
LYMAN NEWELL
Professor of Chemistry
Boston University

SECONDARY EDUCATION
FREDERICK B. BOLTON
Professor of Education
University of Washington

SUPERVISION
ERNEST O. MELBY
Professor of Education
Northwestern University

VISUAL EDUCATION
F. DEAN McCLUSKY
President
National Academy of Visual Instruction

VOCATIONAL EDUCATION
LEWIS A. WILSON
Assistant Commissioner for
Vocational Education, New York

Address all communications to the office of the publishers

THE PALMER COMPANY, Publishers

120 Boylston Street Boston, Massachusetts

NEWCOMB & GAUSS CO., PRINTERS, SALEM, MASS.

EDUCATION

Vol. LII JANUARY, 1932 No. 5

FOREWORD

Douglas C. Ridgley
CLARK UNIVERSITY

THE contributors to the Geography number of *Education* have been selected not alone from the field of geography specialists, but also from experienced workers in the general field of education and administration and specialists in education who have aided directly in developing geography as a strong and useful subject in the curriculum of the common schools.

Dr. Thomas with his world vision as President of the World Federation of Education Associations shows how geography lends itself more completely than any other subject taught in the schools to the development of international understanding and for harmony and peace among the nations.

Dr. Huntington, a world traveler and field student of geography, takes the reader beyond the limits of his own nation and enables him to see himself as others see him. He shows with striking simplicity how queer America may appear in the eyes of the rest of the world largely because of the abundant natural resources at the disposal of a youthful nation.

Dr. Reeder, a specialist in the field of education, evaluates the contributions of history, geography, and the social studies in a manner to aid superintendents, supervisors, and teachers to see these studies in proper perspective and in their close relationships.

Superintendent Power presents an actual sample of a well-planned geography course functioning at the Junior High School level.

Dr. Bengtson presents the sturdy growth of geography as a college subject in American institutions of higher learning and shows how geography is developing its scientific aspects in a thorough and comprehensive manner.

Dr. Cunningham presents to educational specialists and to teachers the value of simple, concrete geographical material in the development of two universal and vital mental processes ever present in ordinary daily thinking.

Dr. Freeman portrays the geographic influences which have operated in aiding men to build up a metropolitan district somewhat remote from other centers of dense population.

Dr. Russell outlines the strong position held by Geography in the state teachers colleges of Pennsylvania.

Dr. Cooper emphasizes the key position and the opportunity held by superintendents of schools in the selec-

tion of teachers prepared to do the geography teaching in a manner to lead to results set forth as desirable in the article by Dr. Thomas.

Mr. Abrams as director of visual instruction reveals geography as a study requiring a liberal use of visual aids in the regular classroom work, and shows how New York state has organized a service readily available to all schools.

Professor Stull brings to the reader an interesting picture of the geography textbooks of a century ago in comparison with those now used in the common schools.

Professor Branom encourages the teacher to make a careful survey of the field of tests and testing and shows how the new type of test may be developed and used to give interest, variety, and value to the testing program in geography.

Miss Grassmuck, out of wide experience in national and world educational meetings, shows how the National Council of Geography Teachers endeavors to cooperate with the larger educational organizations.

The Book Reviews present a few of the publications in geography during the year 1931.

INTERNATIONAL UNDERSTANDING THROUGH THE TEACHING OF GEOGRAPHY

AUGUSTUS O. THOMAS
FOUNDER AND FIRST PRESIDENT OF THE WORLD FEDERATION OF EDUCATION ASSOCIATIONS, AUGUSTA, MAINE

WHEN I studied Geography as a boy, I imagined the earth was fully completed at its creation, that it had not changed, could not change, and should not change. I wonder how many of us now realize that the earth is still in the making, that the work of perfecting is going on all the time, and each day we have a chance to see these finishing processes at work. Whether it will ever be complete to the satisfaction of its Creator or whether it will be constantly changing to meet new conditions, just as it is necessary for individuals to readjust themselves as new situations and forces arise, is an interesting question.

It is, after all, a progressive old earth on which we live, and the subject of Geography is a progressive subject. Like an army of sculptors, the sun, rain, heat, cold, many forms of animal and plant life, and the forces within the earth are leveling down the mountains, filling and broadening the valleys, spreading out the continents, forming new lakes, changing the courses of rivers, lifting one part of the continent here and sinking another part there, changing climatic conditions, making new plants, and bringing about changes in a thousand ways. The earthquake reveals the earth shaking itself into form, resting itself from one position held too long, like a householder moving a hallway or adding a new porch, extending the kitchen, and putting on additional sleeping rooms on this old

house in which mankind lives. In other words, the process of earth building is going on all the time and we are living in an uncompleted house. This change, however, is not inconsistent with the plans of the great Architect who laid the foundation in the beginning, nor does it conflict with the opinion of those who believe that "in the beginning God created the heavens and the earth," but merely adds to the vividness of creation.

Then, again, man is adding to the usefulness of the earth and completing the building by digging canals to float his commerce, draining swamps for new pastures, irrigating deserts for new fields, cultivating new varieties of plants, creating under the laws established in the beginning new and useful things and adding to the comfort and pleasure of the race. To study this house in which man lives, his life within it, and the use he makes of it may be called Geography.

When I studied Geography as a boy in school — Harper's, I think — the subject was defined as "a study of the earth's surface on a plane." This would be a very poor definition at the present time. In those days, Geography was largely a "place" study — mostly map work. Then came a division into physical, political and industrial geography. Since then, we have taken in almost all of the subjects which are related to the study, including geology, astronomy, mathematics, biology, physics, ethnology, and could easily add the ancient languages as well as the modern, political science and government, and almost all of the subjects which are contained in the curricula of schools and colleges. But the study of Geography is fast rounding into a definite field, cutting off those things which may be classified as separate but related subjects.

This new Geography contains the essence of education more completely than any other one subject. Aside from the mechanics of reading, if I were to select one subject which should be taught to all the children of the world as a means of bringing about understanding and cooperation, I should choose the subject of Geography, and this would be chosen with a view not only to the usefulness of the subject matter and the fascination of its study but the cultural elements as well. I know of no subject which combines these several elements which education seeks to cultivate as the subject of the earth and its inhabitants, the geographic laws under which they live, how they are inter-related and how the different parts of the world help each other to live. It is the one live subject vibrating with the keenest interest imaginable.

It is interesting to note how the modern textbooks on geography have caught the step and the spirit and are leading the way in making the subject fascinating and useful. Any child or youth who studies the subject with these new helps must have a higher conception of life, of society, of the industrial and economic well-being of the human race, and, above all, a belief that these things are held together by a great design manifest in the unchanging laws under which not only human beings but all matter exists, acts and has its influence. If the study does not bring us closer together as a race, it has missed its aim, undershot its mark, and will leave a

void in the educational scheme of those who are thus robbed of a valuable inheritance.

To study the countries by themselves and their people without linking them up in their relationships and contacts with other countries and peoples is to lose the essential point of the whole subject. When the student finishes his study or when he completes the curriculum, for he never completes Geography since it is progressive and we are confronting a changing world, if he does not have the conception of a race with a common origin and a common destiny to fulfill a great design, he is not well taught or he lacks the instincts of a scholar.

All the time new inventions and discoveries are making international communication more easy, facilitating the exchange of various products as well as cultures, and are gradually building up a world economic unit, as well as a world social unit. We are now in a struggle toward a world political unit.

By association and imitation we are doing many things alike and are beginning to live in pretty much the same fashion. Chinese young women are being married in Paris gowns. Oriental young men are wearing London styles. American women are wearing the pajama, a style which originated and has long been used in China. This is the hand of civilization guiding its people, but the student must learn that it was not the design to make mankind a homogeneous whole but to give diversification in order that there might be an enrichment of civilization. This diversification of gift does not hinder us from teaching the great unity of purpose, the spirit of understanding, and the desire for cooperation on the part of all mankind. It should drive out of the young generation the old animosities of national distrust and racial hatred and level down those barriers which have in many instances made mankind unhappy and worked to hinder his progress.

We cannot accept geography teaching which does not regard the human values as essential. The study of the plant life, the mineral life, the climatic conditions, the natural resources of the country, and the possibilities of transportation cannot be called geography teaching unless these are translated into the lives of men, and unless again these can show the movement of the human race as onward and upward. Progress is the increasing control of man over his environment and a closer, more intimate understanding of the unchanging, immutable laws which govern and affect the entire universe.

At the time of the Toronto Convention of the World Federation of Education Associations in 1925, I asked Dr. Wallace Atwood to give, in brief compass, a statement of geography. That statement was as follows:

"Geography has the responsibility of introducing the young people of one country to the people of other countries; and upon the nature of that introduction depends, in large measure, the public opinion in one country of the people in other countries."

Just as the kind of introduction we receive to new acquaintances, so the kind of introduction we receive to peoples as a unit will depend upon our impressions of their worth and

their contributions to the institutions of the world.

In introducing the children of any country to the peoples of other lands, I wish we might not forget to introduce the *children* of one country to the *children* of others. Would it be too far-fetched to introduce, especially through activity lines, the children of the United States to the children of China, Japan, Mexico, Germany, Holland, and the other countries, and to leave with them the impression that the children of the world are very much alike and have very similar interests. They have their home life, school life, their plays and games, their pets, their modes of worship. They have their joys and sorrows, they laugh and cry in the same way, and these experiences are universal. There is nothing which will show the kinship of the world's peoples as will this.

Is it going far afield to teach the children how the nations cooperate and how they have agreements which become the rules of procedure, the "traffic rules," of nations dealing with each other? A study of the International Postal Union, passports, the rights of ships to land in foreign ports, the consular system, appointing ambassadors, and treaty-making will supplement the lessons on the exchange of products and how the nations help each other to live and to be comfortable. Such relations can be taught incidentally without taking time from other items which may be considered as pure geography.

We are living in an internationalized world. We are brought to this realization each day in the experiences which have become so familiar to us that we pay little attention to them and imagine they are the natural consequences of modern improvement. We have learned in the earlier grades about cooperation in the home and in the community and what each business or industry has to do in making community life comfortable and agreeable and safe. We have also learned the uses of local government in building highways, in sanitation, sidewalks, schools, etc. Now we come to the internationalized neighborhood. We make our toilet in the morning using materials from the four quarters of the earth. Our toothbrush comes from Japan, our hairbrush from China. Our suit is of Australian wool, colored with German dyes, made over English spindles, and, no doubt, of London pattern. Our buttons come from France; the leather for our shoes from Argentina. We sit down to breakfast, with table spread with Irish linen, with plates of Haviland china, and cutlery from Sheffield. Our honey dew melon comes from South America, our tea from Ceylon or China, and our coffee from Brazil. We read our newspaper with news gathered from all lands and printed on Canadian or Norwegian pulp. Our automobile has tires made of Dutch East India rubber, with chrome, manganese and vanadium from other countries. We go about our day's work and find a Greek boy at the shoeshining parlor, an Irish policeman, a French head waiter in the restaurant, a negro boy at the elevator, a Norwegian girl at the notion counter, a Jewish merchant, and a Scotchman as cashier.

We are assimilating all these elements and peoples and if understood they each bring gifts to enrich and

lay as tribute on the altar of a common civilization. The great purpose of geography is to build within the minds of the growing generation a fair estimate of the values of the different national and racial cultures.

Too many times in all our classes we stop short of the real results at which we should aim. We have in the past been too much absorbed in acquiring facts and have neglected to interpret these facts in terms of life. We may prepare our children and youth on the political divisions of the earth, the lakes and rivers, the mountains, the world's great cities, the products of all the countries and their distribution, but if these have not been associated with the human values, our instruction amounts to little. The children are merely informed and not educated at all. We are like one who plows and plows but never sows. These things are but the stage upon which the great human drama is being played. We have neglected to acquaint them with the things immortal or spiritual. These are the lessons which make ultimately for better understanding, for an internationalized mind, and which help to build up a structure to support movements which will give stability to treaties, integrity to relationships, and make for harmony and peace among the nations. No subject taught in the schools lends itself so completely to this end as the subject of Geography.

A GEOGRAPHER'S VIEW OF AMERICA'S QUEERNESS

ELLSWORTH HUNTINGTON
YALE UNIVERSITY, NEW HAVEN, CONNECTICUT

ONE of the greatest troubles with Americans is that they cannot recognize their own queerness. In spite of all our geographical instruction, the average American fails to appreciate the fact that in most respects it is we who are queer and not the people of China, India, Japan, or even Russia. We realize, to be sure, that we are queer in the sense of being extremely prosperous. Outside of the United States not one-tenth of the world's two billion people live as comfortably as does the average skilled laborer in the United States. We also realize to a certain degree that we are queer in the matter of transportation. We think so commonly in terms of automobiles and cement highways that it is hard for us to realize that probably half the people in the world have never ridden in an automobile and perhaps a quarter have never even seen one. It is still harder for the average American really to appreciate the fact that by far the greater part of the world's people still make almost no use of machinery. They do indeed buy cotton cloth which is made in factories and kerosene oil which is prepared in great refineries. Their crude tools, too, are made of iron prepared in the modern way. But so far as any practical intimate contact is concerned, there must be at least a billion people who almost never get any help from machinery run by coal or water power. They do not even

see movies or electric lights. Another half billion may occasionally ride in trains or busses or may use electric lights, but they never have any kind of machinery for daily use in the house. We are the great exception because we carry watches, ride in automobiles, listen to the radio, use washing machines, electric irons, electric vacuum cleaners, electric toasters and refrigerators. Since not one person in ten among all of the people of the world does these things, it must be we who are queer and not the others.

Another way in which the uniqueness of America is apparent is illustrated by fences. In most parts of the world fences are built around houses, but there are no fences around the fields. With us the opposite is the case. There are few fences around houses, but practically all our fields are fenced. England and some of the neighboring regions of northwestern Europe have many hedges, but that condition prevails in only a relatively small area compared with the world as a whole. In most parts of the world the normal thing is to see field after field in unbroken succession covering all the land between the villages. The only thing to separate one field from another is a change in the crops or a little line, a foot or two wide, where an unsown strip separates one field of wheat, beets, or some other crop from another.

This lack of fences is symbolic of two far greater differences between America and the rest of the world. The first of these differences is that the size of land holdings is far smaller in most parts of the world than in the new lands in the temperate parts of North and South America and Australia. Among us the average size of the farms is about 150 acres. Even in the older parts of the country the average farmer in most states has well toward 100 acres. In Europe, Asia, and Africa, however, where the overwhelming majority of the earth's people now dwell, the average farm is a tiny affair of not more than ten or fifteen acres. In many parts of China the size drops to three or four acres. Even in countries like Great Britain and Denmark it rises to only thirty or forty. This means that in most parts of the world by far the largest occupational group of people is inevitably doomed to poverty so long as the present system prevails. It also means incidentally that fences are a very expensive luxury. This is not only because the farms are so small, but also because as a general rule the farmers of the Old World do not have all of their land in one place. Each man usually owns several small separate parcels. If fences were built around every individual field, the cost would be prohibitive. Because our fields are so large it is relatively cheap to fence them.

The other thing illustrated by the absence of fences is that in the world as a whole materials are relatively more expensive than labor, but with us the reverse is the case. In the parts of the world inhabited by at least a billion and a half people, the place of fences is taken by people. A small boy or an old man or woman can be hired to herd the sheep or cattle far more cheaply than a fence can be made. This same cheapness of labor in contrast to the expensiveness of materials is illustrated by the

way in which in many parts of the old world, and especially in China, elaborate and beautiful handwork is applied to boxes made of poor thin boards which soon crack, or to coarse or sleasy cloth which is not at all appropriate for the beautiful embroidery which it bears.

Another of our queer habits is that even among our urban population a vast number of us live in detached houses set among grass and green trees. It is hard for us to realize that there is anything strange about this, but the facts are clear. Even in our larger cities, like New York or Chicago, there are large areas where this type of detached dwelling prevails. Such houses sometimes contain two or three families but usually only one. In smaller cities, especially in those with less than 100,000 people, a large fraction of the population lives in such houses. And of course this is also true of our millions of suburban people. This seems to us so much a matter of course that we fail to appreciate the fact that it is very uncommon when the world as a whole is considered. In Italy, India, China, and most other countries, such houses are practically unknown. In Germany, and the neighboring parts of Europe, only a very few people live in single houses surrounded by lawns. The rare districts with such houses are there called "garden cities." Many Germans are keenly interested in a movement for developing such districts as suburbs of the main cities. Nevertheless, the overwhelming bulk of the city population still lives in big apartment houses. In cities like Madrid, Rome, Vienna, and even Berlin, big apartment houses built up solidly on regular city streets often adjoin the fields. Almost the only important parts of the Old World where there are large numbers of detached suburban houses are Great Britain, Holland, and Scandinavia. Yet, even in England, the industrial worker who lives outside the central part of a town is usually housed in a little two-story house of brick or stone which forms part of a long monotonous row. He may have a bit of lawn as big as a tablecloth in front of his house, but the chances are that his house is part of a solid row. Even where such houses are separate from one another, they usually have merely a narrow paved walk between them.

An even more striking evidence of the queerness of the people of the United States is the fact that the vast majority of our farmers live on farms. This may seem absurd. It seems to us so natural and convenient for a farmer to live on his farm that we call anything else stupid. The thirty million of us who live on farms seem to be doing the only reasonable and natural thing. In Canada, Australia, and New Zealand the same habits and opinions prevail. Yet, strange to say, in all the rest of the world there are probably not much more than another thirty or forty million farming people who live in this isolated way. In Scandinavia, to be sure, and in mountainous regions in many parts of the world, the farmers do live by themselves on their own land. In England this is true to a slight degree, but even there the great majority of farmers live in villages and go out to their work each day. In other countries, such as Spain, Italy, and Poland, the wealthier land owners may

live in isolated houses on their own land, but the bulk of the agricultural population lives in compact villages. The hundreds of millions of farming people in India, China, Japan, and most other parts of the world practically all live in compact villages. This means that sixty per cent of the world's two billion people probably live in small agricultural villages. India alone has more than a million such villages.

In many ways such agricultural villages are the most characteristic feature of human geography. This is because they retain a stronger individuality than does either the land on which there are no houses or the land that is covered with houses in cities. Grain fields, pastures, forests, and gardens have a strong family resemblance all over the world. Of course, a field of cabbages is very different from a field of potatoes, and an apple orchard is not at all like a banana patch. Nevertheless, cabbages look much the same everywhere no matter who raises them, and so do potatoes, apples, and bananas. Then, too, all over the world the cities tend gradually to become more and more alike. When Yokohama and Tokyo suffered from earthquake and fire large sections were rebuilt in a purely Western style. Street cars, electric lights, steel frames, modern processes of using concrete, and a thousand other new methods tend constantly to become standardized all over the world. Cotton factories and hotels in Bombay are almost like those in North Carolina. A railroad station or moving picture house is much the same thing in Jerusalem and in Montevideo. Cities like Constantinople, Cairo, Madras, and Hankow still possess a high degree of individuality, to be sure. Nevertheless, even in those cities some sections are so thoroughly modernized that the mere appearance of the streets scarcely tells a stranger whether he is in America, Europe, Asia, or Africa. On the other hand, the farming villages all over the world still display a persistent individuality. The flat-roofed, mud villages near Smyrna in Turkey could never be confused with the palm-thatched huts near Madras or with the thatched houses of a wholly different type near Kyoto. Everywhere the farming villages, far more than almost any other feature of the surroundings, reflect the characteristics of the local geography. Since three-fifths of all the world's people live in such villages, we may well say that they are one of the most fundamental features of human geography. Yet in this respect as well as in wealth, transportation, use of machinery, and the use of fences with all that they imply as to the size of land holdings and the value of labor, we are so unique that we well deserve to be called queer.

SOCIAL STUDIES — OR GEOGRAPHY AND HISTORY?

EDWIN H. REEDER
ASSOCIATE PROFESSOR OF EDUCATION, TEACHERS COLLEGE
COLUMBIA UNIVERSITY

DURING the last hundred years tremendous changes have taken place as well in the number of subjects as in the methods of teaching in our schools. The curriculum of one hundred years ago represented for the traditional secondary school largely Latin and Greek. For the elementary school it was the Three R's, and only the barest essentials of these.

Particularly in the last two generations changes have been taking place in this situation. The number of subjects which children study in the schools has been enlarged to the point where we now hear frequent complaints of our over-crowded curriculum. To the traditional Three R's we have not only added such subjects as literature, geography, history, and science, but also art, physical education, health training, music, and industrial arts.

Because of this development it is natural that educational theorists should seek a means for reducing the number of different subjects which a child studies. There are two widely followed methods of doing this: one is to abolish all study of subjects as such and to substitute for them a project, unit of work, unit of child activity, or whatever term one wishes to apply. Under this method one center of interest is cultivated and its ramifications are supposed to bring in all the subjects of study. Usually arithmetic and sometimes reading are given special attention outside of the unit of work.

This is not the place for a complete discussion of the philosophy underlying this procedure. Volumes have been written on the subject and a summary in a few words of the contentions of the opposing parties would be useless and misleading. From rather extensive contacts with the field, however, the writer is convinced that in the vast majority of our schools the procedure outlined above does not obtain. Units of work have been rather widely adopted in the primary grades and are in use in many private and unusually progressive public schools. As a whole, however, teachers are still teaching the subjects of study in the elementary school.

One may or may not deplore this situation. The fact remains, however, that to be of service to the majority of the teachers an article in such a journal as this will do better to help the teachers to do more efficiently the thing they are going to do anyway than to attempt to show them that what they are doing is all wrong and completely to change their present methods. This article is written on that basis.

The second method of cutting down

the number of subjects in the elementary school is the method of combining a number of them into one subject. This has been rather extensively tried in the field of the so-called social studies. Separate treatments of geography, history, and civics have been abandoned in many schools and in their place a curriculum of social science has been introduced.

Upon the method of such a combination of the social studies, however, there is no agreement. The writer has seen courses of study of various sorts which adopt almost every conceivable method of combination. One group, for example, has adopted the so-called tandem method; that is, they would teach a unit of geography, then a unit of history, and then a unit of civics. At any one time a child would be studying only one of the three. Another method would try to make parallelism solve the problem; that is, the Mediterranean region would be studied as a unit, and its geography and history would be learned by the children. Still another method would discard completely all traditional arrangement of subject matter in the social studies and would start with certain fundamental problems facing the United States and the world at the present time. In an attempt to understand the import and possible solutions of these problems such geography, history and civics as may be required will be introduced.

It seems to the writer that this movement toward the social studies has been similar to many movements in American education in that there has been little attempt by the enthusiasts for the new departure to study and evaluate the things they seek to destroy. It would seem to be sound logic before tearing down any structure to make sure that the new structure will do the work better than the old one would. As a rule enthusiasts for the social studies compare their theories with the worst methods of teaching geography, history, and civics in the past. They claim, probably quite rightly, that their way of study is much better than the grinding drudgery of memorization of dates and battles in history, of place locations in geography, and of laws and regulations in civics. This is an utterly unfair method of arguing, however. If the social studies enthusiasts would be fair they must place their ideas in comparison with best modern methods of teaching the social studies separately, and in addition they must examine with care the values for each of the subjects which such teaching is likely to insure. It will be our attempt now to examine such values.

One may well ask at the beginning the question—What is a school subject? Did it come as a revelation from the deity, or spring like Athena full-armed from the head of some educational prophet? Not at all. Each subject of study represents a gradual growth and is an attempt on the part of human beings to organize their knowledge into such shape that it will help them in their thinking. A subject then is simply a way of thinking about the complicated affairs of the world; it is a point of view backed by data which will help to analyze a new situation through clarifying and organizing some of its details. Before dispensing then with

any school subject we should analyze the meaning of its point of view, see whether it is worth conserving, and then note with great care whether it is so conserved in the new plan.

If we examine, first, the subject of history as to its point of view we may go to the man who is, perhaps, the greatest authority on elementary school history; namely, Professor Henry Johnson. Professor Johnson says that the aim of history is to make the world intelligible to boys and girls. He does not believe that one can enter fully into the problems and purposes of modern living unless he has a realization and understanding of the past — its traditions, conquests, failures, and problems. One may use the analogy of joining a secret society. The mere rite of initiation does not make a person a member of the society in the truest sense of the term; he must be cognizant of the ideals and purposes of the fraternity and know in detail how they were developed before he is a true member. In the same way Professor Johnson does not believe that a child becomes a true citizen of the United States or of the world through the mere initiatory rite of being born. He believes that one cannot understand and deeply appreciate, for example, the emotions of a crisis in the past if it is approached merely as a necessary adjunct to the study of a crisis in the present. The historical point of view is, then, essentially chronological.

Turning now to the subject of geography we find a reasonable agreement among geographers that the purpose of teaching the subject is to help boys and girls to think through and understand the inter-relationships of human beings and physiographic forces. The emphasis is primarily on the situation as it is today. What happened in the past is of interest only if it helps to explain the present. The past is never studied for its own sake. The outcome of a sound course in geography is a citizen, on the one hand equipped with information as to the present situation in the world, so that he can read his newspaper or magazine intelligently, and on the other hand thoroughly familiar with the basic geographic principles which obtain in the relationships between man and the earth forces about him. He has, so to speak, an extensive library of mental motion pictures, portraying the activities of men and women all over the world, and the titles or legends of these mental films explain why the people are doing what they are. The geographical point of view is non-chronological; on the contrary it deals with the present world and is essentially predictive, speculating on how man can make continuously more effective use of his physical environment.

If we now consider the subject of civics we realize that it is closely allied to both geography and history and that much of civic importance will be learned in the study of these two subjects. However, the real purpose of civics is to teach children to behave like good citizens. Psychologists tell us that there is only one way to learn to behave in a certain way and that is to have practice in such behavior. The best training, therefore, for civics consists in active participation in the affairs of the school and the community.

Anyone who considers the fields of

subject matter which would help to realize the aims described above, will be struck by the fact that there will be much information which is common to all three. The same facts may be used to solve an historical problem or a geographical problem, and they may also have implications for civics. Every good teacher of the subjects mentioned has always recognized this fact. No good teacher of geography has ever hesitated to introduce historical subject matter into his classes, nor have history teachers failed to borrow largely from the findings of geography. But when a geography teacher introduces historical subject matter into his classes, it is for the purpose of furthering geographical thinking—for answering a geographical problem. When a history teacher introduces geography into his classes, it is to aid in historical thinking. There is a clarity instead of confusion in the point of view from which the subject matter is interpreted.

Relationship then in the social studies is not synonomous with identity. Let us see how this may be true. Here is a statement of fact: a large part of our northeastern states is poorly adapted for agriculture but well adapted for commerce and manufacturing. This fact is in itself neither geography nor history. The interpretation of the fact, however—the use to which it is put in thinking, makes it the one or the other. If it be used to explain one of the causes of the Civil War, it belongs in a history class; if it be used to explain the present situation of cotton manufacturing in New England, or to prophesy future growth and development in this region, it belongs in a geography class.

But, someone may say, why not just study the fact and interpret it from both points of view? Simply because the development of a point of view requires the orderly selection from a vast number of individual facts of those which will build and organize it. If one is trying to develop two widely divergent points of view the task of selection and arrangement becomes a hopelessly confusing problem.

The writer believes he is expressing the opinion of many geographers and historians when he says that he welcomes an integrating course or series of courses in the late Junior, or Senior High School, which might be called "Modern Problems in the Light of Geography and History." Such courses would help the child to bring to bear upon the problems of a sick world both the points of view of geography and of history and would be the finest type of preparation for intelligent adult citizenship. But the successful pursuit of such courses would mean a real grasp on the part of the student of the fundamentals of geography and history. One cannot integrate ignorance.

THE NEW WORCESTER COURSE IN GEOGRAPHY FOR JUNIOR HIGH GRADES

THOMAS F. POWER
ASSISTANT SUPERINTENDENT OF SCHOOLS
WORCESTER, MASSACHUSETTS

OUR new course in Geography for Junior High Grades is a successful attempt to answer the demands for a social study that will fulfill the objectives of the Junior High School. It presents new subject-matter from a new viewpoint. The subject matter is not in the course for grades three to six, the point of view is economic, rather than political-regional. It is not a reworking of material already studied in grades five and six. The course presents interesting and very worth-while material for the pupils.

The methods and procedures, or devices, are progressive. These have vitalized a subject, considered in some quarters more or less uninteresting for pupils and teachers. We are so enthusiastic about the vitality and motivation of this subject when presented according to the suggestions in our course of study that we are rather emphatic in our opposition to recent exhortations in educational circles to "fuse" Geography with History and Civics. Progressive methods and devices, or procedures, based on accepted Geographic principles give it a place distinctly its own. We are indebted to the professional expertness of Dr. Wallace W. Atwood, Clark University, our counsellor during three years' experimentation of the outline in thirteen classrooms of our schools.

The course suggests abundant topics, projects, special reports and group assignments for brilliant pupils, while enabling average and slower pupils to work at their own rate of ability and up to their level of capacity. It is a very adequate attempt to individualize instruction in groups which average thirty-five, but it retains much of the social or group instruction that cannot be divested from the Social Sciences.

The course of study was built in a most efficient and highly professional way. Groups of varying abilities were selected for the three years' trial of the tentative outline. We chose groups of superior pupils organized on an achievement basis in the fundamental subjects; several grades of average ability, from which the more brilliant had been removed for classification in the first group; several rooms which felt the difficulty of the foreign-language barrier in the home; a few groups of mixed half-year grades; another center for the purpose of measuring the influence of the cultural background of the home upon the pupils' efforts. Thus, we succeeded in building a minimum and a maximum course dependent upon abilities of children, a manual for teachers suggesting how to realize on children's backgrounds, and a course ade-

quate to the needs of a cosmopolitan community.

The topic developed in grade seven is The World at Work. In grade eight, it is The United States Among the Nations. The point of view in both is economic, from production through transportation and communication to consumption. The theme method is used in presenting the matter, rather than the gazetteer or encyclopedic. By treating each outline as a small number of themes we can make more definite impressions upon the children. This elimination of encyclopedic material simplifies the work of the teacher also. We have plenty of time for projects and individual assignments. The economic point of view satisfies the maturity of boys and girls in grades seven and eight. It completes the political-regional viewpoint of the lower grades. A year's study of the economic geography of our own country enables us to emphasize phases of the United States which time prevents treating in the intermediate grades. A study of the Geography of our own country from this point of view offers the teacher splendid opportunities for teaching citizenship whether from a national or international point of view. While studying The World at Work course in grade seven, pupils cannot help being influenced by the development of the principle of the interdependence of nations.

In grade seven we develop these nine topics: Life in the Pasture Lands of the World, Life in the Great Forests of the World, Life in the Chief Farming Regions of the World, The Life of the Fishermen, The Work of the Miners, The Work of the Builders, Manufacturing and the Growth of Cities, Trade and Transportation, and Means of Communication. In grade eight, after three orientation chapters on the favorable location of the United States, a brief consideration of the people who founded and developed the new nation and a review of the lands to be developed, we proceed to develop these topics: The Climates of the United States, The Use of Our Farm Lands, Use of Our Grazing Lands, Forests and How Their Products are Used, Our Fish and Fishery Products, Resources Below the Soils, Development of Water Power, Growth of Manufacturing, Travel, Transportation and Communication, and the Development of Domestic and Foreign Commerce.

COLLEGE GEOGRAPHY

NELS A. BENGTSON
CHAIRMAN, DEPARTMENT OF GEOGRAPHY
THE UNIVERSITY OF NEBRASKA

IT may be true that, from the viewpoint of the student, geography is unfortunate in its label. 'Tis *geography* in the lower grades of the elementary school, through high school if taught at all, and in the college it is still just *geography!* Unlike mathematics, where *numbers* are taught in the lower grades, followed by the alluring terminology, arithmetic, algebra, geometry, trigonometry, analytics, and calculus as the steps of advancing scholarship are taken, geography keeps the same name throughout. Few, even among educated people, realize that college geography is a subject of mature study just as truly as is college mathematics or college chemistry, biology or economics. If some sage would provide names more profound and differentiated than the lone term now in use, the standing of geography might be enhanced in academic circles.

Whether handicapped by its lone name or not, geography as a college study has been making substantial progress during the past quarter of a century. Although a few courses were offered in Harvard and Princeton even prior to 1860, progress was slow until after 1900. At the turn of the century only twelve of the American colleges and universities were offering courses in geography and in them it was mostly physical geography taught under the wing of geology. Since then a profound change has occurred. Now geography is a fully recognized discipline in nearly every large university or college in the United States from Harvard, Clark, and Columbia in the east to Washington and California on the west. It has likewise won its place into a large number of the smaller colleges, and a recent survey shows that geography is taught in over 35 per cent of the independent junior colleges of this country. In view of this substantial growth and wide recognition of the subject it may be worth while to raise the questions: "What is the function of geography as a college discipline? Is it a science?"

The term *science* suffers because of multiplicity of definitions. Some would limit it to such phases of knowledge as may be organized and stated with mathematical precision while others define it so broadly as to include everything from physics to politics. Because of these various interpretations it seems advisable for us to state some general tenets upon which we base our conviction that a given scheme of discipline may properly be be dignified as of the scientific. The case has been well stated by Bowman: "To be a science a subject should by definition fulfill three conditions: It should (1) have its facts arranged in systematic order; (2) rationally explain given conditions in accordance

with established laws; (3) predict the future course of development or lead the way to the discovery of new laws. These things science does, not in any absolute or infallible sense, but rather with moderate degrees of accuracy only, and the degree of accuracy varies with the nature of the facts. In almost every subject, whether it be history or astronomy, the data of the subject may be divided into two distinct groups, (1) a group of facts capable of rather rigid scientific treatment, (2) a group of facts so related to the changing spirit of man and his inventions that less importance should be attached to the matter of laws and much more attention to the point of view."[1]

I believe that careful analysis justifies the general statements quoted. Such subjects as physics and mathematics, universally acclaimed as truly typical of the sciences, have their undisputed cores, but beyond such cores are the broad peripheral zones where the *point of view* is the determining factor. What other criterion can be used in distinguishing between physical chemistry and physics, or between mathematical astronomy and celestial mathematics? In this respect geography is not unlike the other sciences; it has its undisputed core of facts subject to rigid, systematic treatment, and it has its border zone where it comes into close contact with many other fields of knowledge and into direct contact with human relationships. In fact it is perhaps true that its peripheral zone is so broad and often so interesting that some people overlook the central core of the subject.

Among various students, according to Sauer, three distinct fields of inquiry have often been designated as geography, namely:

1. The study of the earth as the medium of physical processes, or the geophysical part of cosmologic science;
2. The study of life-forms as subject to their physical environment;
3. The study of the areal or habitat differentiation of the earth, that is, chorology.[2]

That the study of areas is geography there can be little doubt, and there appears to be a definitely crystallizing view that therein is the core of the subject. Terminology may differ, some referring to it as areal geography, others as regional, still others as chorology, but they all refer to the same general field. Geography assumes the responsibility for the study of areas because there is a common interest centering about them. No other subject makes area or landscape its special field. If some other line of study were to be organized and given the name geography, the common interest in areas would still remain as before. Although geography is a name more than 2,000 years old, geographic accounts and descriptions were written long before, and under other names than geography. In other words, the field of study was recognized long before the present name was applied to it. The universal and persistent interest in landscape areas and the priority of claim of geography as to this field are the

1 Bowman, Isaiah: Geography in Relation to the Social Sciences, 1929.

2 Sauer, Carl O.: "The Morphology of the Landscape," University of California Publications in Geography, Vol. II, No. 2, 1925.

evidences on which the case for the popular definition may rest.

Sauer takes the stand that: "We may, therefore, be content with a simple connotation of the Greek word which the subject uses as its name and which means most properly *areal knowledge*. The Germans have translated it into *landschaftskunde* or länderkunde.[3]

Using the area as the ultimate unit with which geography deals, the element of relationship must remain permanent in the organization of knowledge upon such unit basis. Therefore, we hold that geography is the science which deals with the relationships involved in the adjustments of human activities to the natural environment. The elements of the natural environment are:

1. Location, *per se*
2. Climate
3. Land surface, including water bodies
4. Distribution of natural resources
5. Distribution of biological features

The primary objective of geography may be stated,—the study of the elements of the geographic environment and the determination therefrom of the principles which are important in describing how the activities of man are in adjustment or in maladjustment to the factors of the natural environment and to seek the evidence as to why they are so. This objective implies the area or region as the fundamental unit of study or research.

The primary objective is perhaps essentially a statement of teaching significance. In contradistinction to it the *ultimate objective* of geographic activities is the collection and the correlation of data of sufficient scope to permit the experienced geographer to predict with benefit to society the popular trends of human adjustment or to advise regarding desirable methods of adjustment to given natural environments.

In a statement of a conception of geography based upon these objectives we must necessarily recognize some broad divisions of the subject itself. The two major divisions may be termed *regional geography* and *systematic geography*, the former taking rank as the central core of the geographical field, the latter constituting the border zone wherein contacts with other sciences are common, helpful, and inevitable. When one seeks knowledge regarding the landscape of Australia or Madagascar, the geographers' works are the sources sought. The geographer must know its surface, its climate, its more important plant and animal groups, its resources, industries and products, its trade and transportation, its human inhabitants and its political subdivisions. And these must be known, not as isolated bits of knowledge, but as correlated items in their interdependent relationships, because it is thus that they constitute the landscape and manifest the activities of the region. Is it not clear that to know even one continent, as a geographer is expected to know it, involves a heavy responsibility?

In order to qualify for serious work in regional geography it is necessary to become as familiar as possible with several fields of systematic geography.

3 Sauer, Carl O.: "The Morphology of Landscape," 1925.

In systematic geography the various facts are studied in connection with their special classifications: land forms, climatic features, distribution of plants, animals, and humans are studied as they occur all over the world. Under this heading one would have to place such studies as have forms, phenomena, or resources as their central themes of study.

Physiography, which is admittedly geomorphology, and is thus closely related to geology, is the only phase of geography which is properly referred to as *earth science*. An appreciation of it is necessary in order to gain an intelligent conception of the surface of the land. Climatology occupies the debatable ground wherein meteorology and geography meet, and it is suggested that for the distinctly geographic phase the term *climatography* should be used. Economic geography must take cognizance of the natural resources in their areal distribution and the relationships which grow out of them in accounting for industrial enterprise. In such studies, the geographer must not ignore the significance of factors which are purely economic, social, political, or historical, but his field of emphasis does not lie in such factors.

In its relation with other sciences, the specialized sciences commonly referred to as the natural sciences on the one hand and the social sciences on the other, geography finds its most intimate contacts along the border zones. It is there that such special phases of the subject develop as agricultural geography, historical geography, economic geography, and political geography.

The term, *geographic influence,* has been severely criticised by numerous workers, particularly by historians. Perhaps we must admit that geographers in their youthful enthusiasm have been over-zealous in claiming for geographic influence matters which were not so simple as a casual study might make them appear to be. It is possible that Ratzel, Semple, and Brigham made extravagant claims in some cases, but they did call attention to the existence of natural environmental influences in shaping events which have become recognized as of outstanding historical importance. As illustrations of this, it seems that one can hardly deny that the flat plains of Flanders and the heavy rains which preceded the Battle of Waterloo were factors in frustrating Napoleon's promising plans. Again, the effectiveness of barriers in inducing compactness of settlement was demonstrated in the contrasts of French and British occupancy of lands in North America. The Appalachian barrier, consisting of the Pocono and Allegheny escarpments and the Blue Ridge Mountains, was instrumental in confining the English colonists to the coastal regions until settlements were fairly compact, until flexible, yet stable, governments had been worked out, and until a sense of political unity had been developed there. When expansion westward finally came, its results were permanent. On the other hand, the French settlements along the lower St. Lawrence lacked the restraining influence of a western mountain range. Expansion along the St. Lawrence, the Ottawa, and the Great Lakes was so readily accomplished that it was undertaken while the scattered posts were unprepared to hold

the territory gained and claimed. They had not consolidated their position near the coast and had not developed a base which they could use for suitable defense when emergency arose. These features of the natural landscape of eastern North America cannot be ignored in accounting for the permanency of British occupation and the transient, temporary occupation of the French.

As another illustration of geographic factors in history it seems fair to insist that the extraordinary rainy summers of 1862 and 1863, which caused almost complete failure of the wheat crop in England, and thereby clearly determined her dependency on the American North for food, helped to overcome the demand of the cotton manufacturers of England for the recognition of the Confederacy. It may be that this did not determine the outcome of the Civil War, but surely it was a factor of considerable importance in the ultimate victory of the Northern forces.

The realm of social geography is perhaps not quite so concise as that of historical geography, yet a single reference may suffice to illustrate the importance of the natural environment in modifying the thoughts and feelings of peoples. At the risk of being called blasé, it is pertinent to note that in the various parts of the world men's ideas of heaven and hell reflect the pleasant and unpleasant aspects of their environment. Thus, to the dwellers on the sun-scorched slopes of Asia Minor, heat represented the utmost in torture, whereas to the inhabitants of northern Norway cold was the conspicuous discomfort. Hence a hot hell in one instance and a frozen hell in the other! The Heaven of the Christians, derived from the traditions of commercial Mediterranean areas, is the Heaven of golden stairways and golden harps, whereas the Heaven of the Indian was a happy hunting ground rich in the game which furnished him his most enjoyable sport.

Economic geography functions directly as the interpreter of the relations of environment to the development of economic activities. There is danger of claiming too much and therefore of ignoring the human factors, but there is perhaps even greater danger that the specialist in economics who is untrained in geography will ignore or understate the fundamental significance of the environment in accounting for the location and development of great industrial enterprises. Thus, the significance of the easily developed water powers of New England and the unfavorable agricultural aspects of the land there can not be lost sight of if one would understand the early development of the cotton manufacturing industry in that section of the United States. Through glaciation, streams had been diverted from their pre-glacial channels, glacial debris had caused pondage and thus formed natural reservoirs, and man did not have much difficulty in making use of the water.

These illustrations have been presented with a view to clarifying the distinction between regional and systematic geography. The former represents the undisputed core of the subject, the latter the peripheral zone. To meet the standard set for a distinct science, that is, to be naïve as a special discipline, geography must

hold as its central theme the study of the features, resources, and phenomena in their relationships to human activities *within areal units.* It occupies a field which, though intermediate between the natural and the social sciences, correlates the two, and this field is but little cultivated by any of the other sciences. Unlike the social sciences, geography does not deal primarily with the adjustments between man and man. Unlike the natural sciences it does not deal primarily with the interplay of natural forces. The field of geography is the study of the adjustment of man to the natural forces and conditions which constitute his environment.

As a field of thoughtful knowledge, geography emphasizes the interdependence of environmental factors and the interdependence of nations. It is therefore a fundamental subject in the sense that it places a wholesome philosophy of life into the minds of young students and draws their attention into the channels of consideration and tolerance, as well as into the realm of understanding points of view other than those held as a result of their own limited experiences. At the same time, it is a subject which demands of its professionals careful preparation not only in the complex field of geography but also in the related fields of the natural and the social sciences. The geographers of today must be students of history, political science, economics, and sociology as well as students of the natural sciences. I believe that it is safe to assert that every professor of geography in the ranking universities of this country has had at least a general introduction through directed study into each of the above mentioned fields. It is fortunate that such is the case because all their abilities will be tested by the serious responsibility which is theirs — the preparation of a scholarly, comprehensive regional geography of the United States.

ANALYSIS AND SYNTHESIS IN GEOGRAPHIC INSTRUCTION

FLOYD F. CUNNINGHAM
PROFESSOR AND HEAD OF THE DEPARTMENT OF GEOGRAPHY
STATE TEACHERS COLLEGE, FLORENCE, ALABAMA

HUMAN beings, who collectively make up the mass of humanity, are actors in scenes of infinite complexity. This complexity, which grows even more complex as the days pass, constitutes a drama which has been running for thousands of years, the drama of the world's work.

Every economic activity of man is compound rather than elemental, involving either directly or indirectly certain relations to the environmental complex in which he lives. Even many of the mental activities of man are closely related to the environmental complex, the relationships being often subtle, so that only the specialist can detect them.

Modern geography is that branch of science which deals essentially with the analysis and interpretation of the reciprocal relationships that exist be-

tween MAN and the elements that make up the environmental complex. This environmental complex consists of those elements that are social as well as physical in nature.

It is readily seen that geography therefore is neither a description nor an orderly presentation of facts, although both are incidentally associated with good geography teaching. The memorizing of facts, and especially the reasoning involved, gives geography its greatest disciplinary value. The description and interpretation give it its great utilitarian and cultural values.

A relationship necessarily involves at least two things, man on the one hand, and one or many elements of the environmental complex on the other. These elements may be divided simply into five categories, following Huntington and Carlson: (1) Locational, (2) Climatic, (3) Physiographic, (4) Biological, and (5) Social, each of which may be subdivided into many component parts.

Inquiries into the interrelationships existing between man and the elements that compose the environmental complex in which he is living, playing, and carrying on his economic activities should be analytic-synthetic in character, or perhaps even philosophical. The day when there was a superabundance of memory material for every kind of specialty is passing, but unfortunately the scientifically or technically thinking students have not been trained as rapidly as they should.

We need, therefore, to stimulate our students more to analytic and synthetic thinking, through the introduction of studies which draw their materias from several disciplines. To what end? To the end that they may become citizens who are able to meet and solve life situations as they arise.

I do not mean to imply that geography should be taught only because of its utilitarian value. It should be studied not only as a means to an end, but also as an end in itself, for its own intrinsic value. Just as there must be a balancing between facts and judgments in geographic instruction, there must also be the proper balancing between the utilitarian and the cultural values.

The pursuit of any knowledge for culture's sake alone leads one too far toward the realities of life; on the other hand, the pursuit of knowledge which reaches on farther than utility leaves us slaves to the material world. If there is any subject that contributes more to that proper balance between the utilitarian and cultural values than geography when properly taught, I do not know it.

Real geography, therefore, becomes the appraisal or weighing of many elements involved. In the evaluation of all elements involved there are two methods, analytic and synthetic. Without defining analysis and synthesis I shall proceed directly to show how each is related to, or is part of, geographical thinking.

The analytic and synthetic type of geographical work is well illustrated by a recent survey made to determine the most satisfactory place on the eastern coast of the United States for the western terminus of a trans-Atlantic dirigible line. Washington was chosen after a thorough analysis of the several elements of the environmental complex had been made by a noted balloonist and meteorological expert, a geog-

rapher if you please. Before making his decision he measured wind velocity, snowfall, rainfall, fog, frequency of thunderstorms, summer and winter temperatures, and even soil conditions. Among the principal cities in the desirable area extending from Philadelphia to Richmond, Washington showed the smallest number of objectionable features. In the four principal cities studied it was found that the wind conditions were about the same. Baltimore suffers more from fog. The northern part of the territory is more subject to heavy snowfall. Washington is outside of the section of heaviest snows. Rainfall is about the same at the four cities, and wind conditions are better a little back from the coast. This would favor Washington. Washington's chief disadvantage apparently was that it is near the belt of southern high temperatures in summer. Temperature is of importance for its effect on gases and on lifting capacity. The capital is in a favorable position, however, as regards frequency of thunderstorms. It ranks about equal with Philadelphia in this respect, having a smaller number annually than other nearby sections. Location relative to population centers and transportation lines were properly evaluated in the analysis.

So satisfactory were the conditions at Washington that engineers of the Goodyear Company and the International Zeppelin Company have begun a geological survey of the proposed air base. Drainage for the field and soil compositions for the foundation of a gigantic hangar are being investigated.

It becomes evident at once that according to the definition of modern geography, that the above illustration is a good example of geographic study. In the evaluation a type of analytic-synthetic thinking was done. Such a study is applicable to all types of geograhic work, whether it concerns a study of the Coffee Industry of Brazil, the Effect of Insularity upon the Development of Great Britain, the Non-Militant Attitude of the Swiss People, or what not.

There were four cities involved in the evaluation. When those four cities are compared in terms of any single criterion or element, such as thunderstorms, such a comparison may be called analytic.

The judgments may be combined on the basis of many elements or criteria and compared to the summary of judgments with similar composites for the four cities. The comparison between the two composites may be called the synthetic type of evaluation.

Just what occurs in the mind of the student who is doing the analytic-synthetic type of geographic thinking is not within the scope of this paper. Their evaluations are no doubt unconscious and subjective.

Even if final judgment is arrived at through nothing more than a process of balancing advantages, the student must necessarily do a great amount of analytic and synthetic thinking. This is true whether one pursues the subject for either its utilitarian or cultural values.

Students encounter serious difficulties when trying to evaluate relationships with many elements involved. They are prone to attempt to measure quantitatively such relationships, and this results in erroneous geographic thinking and in wrong conclusions.

With the exception of the work of Dr. Carlson of Ohio State University little has been done toward attempting to measure quantitatively the relationships.[1] Such methods when perfected will partly objectify, although never entirely, the means of evaluation of the many elements involved.

What justification may one find for teaching the new geography in the schools, colleges and universities of our land? The acid test is to what extent does it contribute to the effective education of the youth? That brings us to a definition of modern education. Let us use a very recent one, that of Dr. William John Cooper, United States Commissioner of Education. In a rather lengthy definition he says: "Human education is a process of individual growth and development, beginning with birth and ending only with death, requiring at the outset much effort on the part of others in discovering, nourishing and directing inherent potentialities, but at every stage demanding increasing self-reliance and self-control. During this entire process the individual learns to observe and analyze his natural environment, to modify it to his needs, and to adjust himself intelligently to non-alterable conditions; to comprehend the social environment in which he finds himself, to understand how it came to be what it is, and how it can be changed, and to appreciate the mutual 'give and take' character of human association to the end that he may not only demand his own rights and opportunities, but also will discharge to the full his economic and social obligations."

Is there any subject other than geography which contributes so much to the effective education of the youth of the world?

This new conception of geography as a subject which analyzes and synthesizes man's relation to the environmental complex, which contributes so greatly to the education of the youth of today, has been largely responsible for the introduction and growth of geography in many of the more progressive universities and liberal arts colleges of America and of the world. The product of the geography classroom and laboratory are creative-minded students who are willing to concentrate their attention on those things that contribute to the welfare of the human race. We cannot encourage the spirit of inquiry necessary to effective education except through an analytic and synthetic type of geographic thinking. No mental accumulation of facts alone has made anyone a great geographer, but an understanding of the interrelationships existing between man and the environmental influences have produced the creative-minded geographers. And there are no more potent instruments to arouse the ambitions and exercise the reasoning powers of students than properly directed analysis and synthesis. The geographer must be not only a creative artist, but for the sake of the cultural value which his subject offers, a creative-appreciator of life. Our appreciation of a situation or of natural phenomena is in direct proportion to our ability to analyze and synthesize it. To say that geography when standing alone makes no contribution to the

1 Carlson, Fred A. Geographical Index Numbers. Science, Vol. LXII, No. 1864, page 300. September 19, 1930.

education of youth is an admission of the ignorance of the subject of modern geography.

If you would partake of the activities of this busy and complex civilization, if you would have your eyes opened to see the beauties of the world and your ears attuned to hear its music, then study the analytic-synthetic type of geography.

SPOKANE: AN INTERMOUNTAIN TYPE CITY

OTIS W. FREEMAN
STATE NORMAL SCHOOL, CHENEY, WASHINGTON

SPOKANE possesses the largest population, enjoys the greatest distributing trade, and has become the greatest railroad center between the Twin Cities and Puget Sound. White men first settled on the present location of Spokane, then called Spokane Falls, in 1873. The townsite was plotted in 1878 and the city was incorporated in 1881 with hardly 1,000 population. It is, therefore, obvious that geographic factors must have favored rapid growth in the last fifty years to make the present city of 116,000. Spokane has an advantage as a unit for urban study in that the entire growth of the city from its inception took place during the life of early residents still living, who have watched the community change from a hamlet to an important city. The influences affecting the growth of Spokane are therefore more obvious than in many eastern urban centers.

Human factors aided natural factors to produce the modern Spokane. The city was favored during its early growth by obtaining keen, far-sighted and generous leaders, who proved a distinct aid in the development of Spokane. Without such leaders it seems possible that Cheney, about twenty miles southwest, or Post Falls, about the same distance east of Spokane, might have become the great city of the Inland Empire. Cheney indeed, in 1881, became the county seat, winning a closely contested election from Spokane, and for a brief time had the larger population. Cheney was named for an official of the Northern Pacific Railroad and expected to secure the railroad division headquarters and carshops. However this favor was bestowed on Spokane when the railroad was finished in 1883, and that city rather than Cheney became the large center. Spokane even secured the county seat in the election of 1886. All transcontinental railroads entering Spokane, except the Great Northern, also serve Cheney. It seems probable if the first carshops and division headquarters had been located at Cheney then that city instead of Spokane would have become the distributing center, with Spokane itself mostly devoted to manufactures depending on water power. Thus a "Twin Cities" would have developed twenty miles apart. A human decision fifty years ago chiefly determined that instead of two cities there should be one large urban unit, Spokane.

Cities in the 100,000 class that lie between the 100th meridian and the Cascade-Sierra Nevada uplift number only four: i. e., Denver, El Paso, Salt

Lake City, and Spokane. Within this vast territory, comprising 40 per cent of the area of the continental United States, conditions generally oppose large urban groups. Unfavorable factors include: altitudes usually above 2,000 feet, which shorten the growing season, aridity resulting from a location in the interior of the continent to leeward of mountains, the handicap of long distances to markets, rugged mountains that make railroad building difficult and costly, and limited natural resources over a large part of the area. The four large urban centers therefore require for their development a combination of many favorable geographic factors both human and natural. Spokane gives a good illustration of this truth.

Among the chief natural factors favoring Spokane are: water power, location at the end of a pass towards which transportation routes naturally converge, on a site for the exchange and distribution of commodities between regions producing different products. Spokane has an invigorating climate. However, this is not a unique characteristic, but one shared with the whole intermountain country.

The fact that physical features and mineral resources depend to a great degree upon the past geology finds expression at and around Spokane. The underlying bed-rock of the region consists of quartzite, granite, schist, argillite, and other hard metamorphic rocks of pre-Cambrian age. These crystalline rocks form the mass of the mountains east of Spokane in northern Idaho, a large part of the Okanogan Highlands to the north, and certain outlying high hills like Mica Peak south of the city. Granite is quarried at several places within a few miles of Spokane, for building and monumental purposes. Prolonged weathering of feldspathic rocks has produced a high grade kaolin or china clay that serves for a superior grade of brick and terra-cotta and may become some time the basis of a pottery and porcelain business. Of most importance, however, are deposits of metals, especially lead, silver and zinc, found in the Coeur d'Alene mining region of Idaho, in northeastern Washington, and adjacent parts of British Columbia. Some gold and copper are mined. The largest deposit of magnesite in the United States is worked near Chewelah, Washington, north of Spokane. The first metal coming from the Spokane area was placer gold. The discovery of lead-silver ore in 1885 in northern Idaho led to a mining industry that has produced one billion dollars in new wealth with dividend payments to date of around $200,000,000. Numerous fine office buildings in Spokane are monuments to the mining industry, because built from the profits of the Idaho mines.

During the upheaval of the mountains of northeastern Washington, northern Idaho, and western Montana, some long narrow blocks of the earth's crust slipped downward instead of being uplifted. Valleys that resulted from such "faults" generally extend north and south, parallel with the trend of the mountains. Spokane Valley, however, resulted from a down fault and runs east and west, thereby providing the easiest route across the northern interior mountains of the country. This route was followed by an old Indian trail. Lewis and Clark failed to find it, but Lieutenant John

Mullan in 1853-4 laid out a road through the pass from Washington territory to the head of navigation on the Missouri that was followed by prospectors and settlers. The Northern Pacific likewise built through this pass. Today the Northern Pacific; Great Northern; Chicago, Milwaukee, St. Paul and Pacific, and a branch of the Canadian Pacific enter Spokane from the east by way of Spokane Valley, thereby making Spokane the greatest interior railroad center of the northwest.

Ages after the formation of the crystalline bedrock around Spokane vast sheets of lava poured from the earth and built up the Columbia Plateau by covering most of the original hilly surface of the country. The site of Spokane was overwhelmed by lava flows hundreds of feet thick. Lava dams caused lakes and these slowly filled with sediments. Today these ancient lake beds furnish clay for brick. After crushing, the basaltic lava serves for road metal.

During the glacial period vast floods of water poured down Spokane Valley from melting glaciers in Canada and Montana. A wide valley was carved in the basaltic lava which outcrops in precipitious black cliffs of "rim rock" on either side. The valley was filled to a depth of many feet by gravel dropped by the flood, to form a flat floor with higher bars and terraces above the general level. Some thick gravel bars have blocked the mouths of tributary valleys, forming lakes which serve as delightful pleasure resorts for Spokane, as Liberty Lake and Newman Lake. Level terraces of gravel at Spokane itself provide favorable building sites for residences. The level floor of the Valley east of Spokane provides good industrial sites adjacent to railroads. Here have located a flour mill, meat-packing house and stock-yards, paper mill, wood-working plants, cement mill, and other smaller establishments. The level land encourages irrigation from the water of Spokane River and nearby lakes. Here, in the suburbs, east of the city limits, thousands of families live on small farms and garden plots, raising fruits and vegetables, keeping cows and poultry to add to the income from jobs in the city.

The Spokane River empties into the Columbia and thence reaches the Pacific, but in the glacial period the Columbia was blocked by a great ice sheet that descended the Okanogan Valley about one hundred miles west of Spokane. This ice dam compelled the glacial flood water to rise until it topped a divide some twenty miles south of Spokane and flowed down across lots to the lower Columbia. This so-called "Spokane flood" eroded into the basalt of the Columbia Plateau many ramifying channels which in places attain a depth of hundreds of feet. Even rocked wall basins were excavated by the flood. Lakes now occupy such basins, which add to the pleasure and fishing available around Spokane. The railroads leaving Spokane follow the ancient flood channels which make the easiest possible route across the Columbia Plateau. Unfortunately the casual traveler by rail through eastern Washington sees from the car window only a barren rocky valley and may fail to realize that the hills above are crowned by splendid fields of wheat.

Railroads diverge like the fingers of

a hand as they emerge from Spokane to the west and south, spreading over the fertile Columbia Plateau to gather cargoes of wheat and animal products. In all, Spokane is served by five transcontinental railroads and twelve branch lines.

The falls of the Spokane River result from the outcrop of a hard ledge of basalt in the stream bed. Other sites are available where the river crosses hard crystalline rock at Long Lake, Little Falls, Post Falls, and Nine Mile. The river comes from Coeur d'Alene Lake, which helps maintain a steady flow of water. 30,000 H. P. are generated from two plants at the falls in Spokane, and 185,215 H. P. from seven plants on the Spokane River within thirty miles of the city. Over one million H. P. could be developed on the Columbia and other streams within 150 miles of Spokane, so that a shortage of hydroelectric power is most unlikely.

Coal deposits are not found close to Spokane, but coal can be imported from the Cascade field, from British Columbia, Utah, Montana, and Wyoming. Much sawdust is used for fuel.

Spokane is favored by its location between regions producing different things. To the north and east of Spokane are forests of yellow pine, white pine, fir, and other species. One of the first industries located at Spokane Falls was a sawmill. Now Spokane is the most important sawmill center in eastern Washington. Besides minerals from this mountainous area that have mentioned, there has come a considerable volume of animal products. South and west of Spokane the level to rolling land is devoted to wheat. The fields within the trading zone of the city produce 60,000,000 bushels of wheat yearly besides other grains. A flour and grist mill was early built at Spokane Falls and flour-milling still is a leading manufacture. Fruit raising, dairying, and general livestock production are important around Spokane and the receipt and shipment of fruit and animal products employ many men. Spokane handles much of the exchange of commodities between the agricultural region and mining, lumbering, and livestock areas. The diversity of its hinterland helps to stabilize business in Spokane.

Eastern cities are more essentially manufacturing centers than Spokane. In 1929, $46,400,000 of goods were manufactured in Spokane City and $65,100,000 in Spokane County, with most of the difference coming from Spokane Valley within what may be considered the metropolitan area of the city. Even including all of Spokane County, the value of manufactures generally totals much smaller than an eastern city of 100,000.

The aspect of the business section of Spokane is superior to almost any eastern city of 100,000. In the character of business blocks, hotels, Spokane compares favorably with cities of 200,000 and more in the east. The explanation lies in the fact that the city is the trading center of 500,000 people in the so-called Inland Empire of eastern Washington, northern Idaho, western Montana, northeastern Oregon, and the border land of Canada. The census shows Spokane with 116,000 people doing $52,000,000 of wholesale business in 1929 compared with $46,500,000 in Worcester with 195,000 population, and $51,000,000 in Springfield, Massachusetts, with

150,000 inhabitants. In the same year the retail business $77,200,00 in Spokane, which is likewise much more than an average city of its size in the United States. This results from buyers coming to trade in Spokane stores from distances that often exceed 100 miles and frequently 200 miles, while in the east cities the size of Spokane may compete with each other within distances of under fifty miles.

Spokane is essentially an "American" city. In 1930 the census showed 98,137 native whites, 16,190 foreign-born whites, 617 negroes, and 570 of other races. Its inhabitants have provided excellent schools and colleges, abundant pure water, and an extensive park system. These things, together with the general lack of factory smoke and the delightful climate, help make Spokane a favored place of residence. Combined with other factors mentioned, they have aided Spokane to attain paramount importance among cities of the Inland Empire. A great scheme has been proposed for irrigating 1,000,000 acres or more of arid Columbia Basin land. When this great project is carried to completion, Spokane will reap much benefit from increased business and population.

THE PREPARATION OF GEOGRAPHY TEACHERS IN PENNSYLVANIA

H. Harrison Russell
STATE TEACHERS COLLEGE, BLOOMSBURG, PENNSYLVANIA

GEOGRAPHY is distinct in the preparation of teachers in the teachers colleges of Pennsylvania. Its prominence is due to a recognition of the fact that it functions definitely in accomplishing the aims of modern education. The development of citizenship is a cardinal objective in education. No other school activity affords so well the opportunity for one to become acquainted with his neighbors, to appreciate their problems, and to acquire a realization of the need for coöperation,—no matter whether the neighbors be those of the immediate community, the section, the nation, or the world. Therefore, geography, during recent years, has become more and more necessary in the schools from the primary grades through the college.

The present geography curriculum in the teachers colleges of Pennsylvania is the result of more than a decade of work in revision of the curricula of the teacher-training institutions of that commonwealth. In 1925 the Board of Normal School Principals appointed a committee to reconstruct the differentiated curricula which had been initiated in 1920. As a result of the work done by this committee, the following differentiated curricula were adopted for all the state teacher-training institutions:

I. Two-year Curricula
   1. Rural School
   2. Kindergarten-Primary (Kindergarten and Grades 1, 2, 3)
   3. Intermediate Grades (Grades 4, 5, 6)

II. Four-year Curricula
   1. Elementary School
   2. Secondary School

3. Special Subjects
   a. Music. b. Art. c. Home Economics. d. Commerce. e. Health Education. f. Practical Arts.

In accordance with this differentiation in the preparation of teachers for the various levels of the public school, the geography courses were planned in conferences attended by the geography teachers of all the normal schools and teachers colleges of the state. Four annual conferences during the three days immediately preceding Thanksgiving Day were devoted to discussions of the geography courses. During the interims, committee members were working up on the courses.

From 1925 to 1931, the geography courses in the various curricula have been:

A. Elementary School

I. Two-year curricula

1. Rural School—*The Teaching of Geography in the Rural School.*

   A three-semester-hour course dealing with subject matter as outlined in the State Syllabus and with techniques of teaching geography in the rural school.

2. Kindergarten-Primary — *Teaching of Primary Subjects.*

   A three-semester-hour course of which about one-third of the time is devoted to teaching geography in the third grade. Attention is given to (1) geography in the home community, and (2) geography in different environments of other parts of the world.

3. Intermediate Grades—*The Teaching of Geography.*

   A three-semester-hour course in which typical units of subject-matter and methods of presentation in the fourth, fifth, and sixth grades are worked out.

II. Four-Year Curriculum

In the four-year curriculum for students in the elementary field, three courses in geography have been required.

1. Principles of Geography
2. Physiography
3. The Teaching of Geography

B. Secondary School

A four-year curriculum only.

All students entering the four-year course to prepare for teaching in the secondary school were required to take two three-semester-hour courses in geography during the freshman year, viz.:

1. Principles of Geography
2. World Problems in Geography

At the end of the freshman year, any student preparing to teach in the secondary school, either junior or senior high school, chose two fields of work in which he took prescribed courses. These courses have been identical in all the teachers colleges of the state, but the sequence of courses has been arranged by the individual college. The fields of work in which the student might choose any two, and a third as a partial field, have been English, Foreign Language, Mathematics, Geography, Social Studies, Science. These fields of study are offered in all the teachers colleges of the state.

About one-third of the student's work is directly upon the special fields which he chooses. The other two-thirds deal with core, or basic, courses, such as those in education and English, and with courses which give an insight to the main fields of human endeavor not included in the chosen special fields.

In the teachers college with which the writer of this article is connected, about one-fourth of the four-year students who elect the secondary-school curriculum, choose geography as one of their special fields of study. Although geography and science make one popular combination, and geography and social studies constitute another selection made by many, these somewhat closely connected fields are not the only ones chosen. Every field in the curriculum has been taken with geography.

After the field has been chosen, the student has had, up to September, 1931, no choice of courses. The courses have all been prescribed within the field and the sequence of courses indicated. Eight three-semester-hour courses and one semester of practice teaching of geography in the secondary school must be completed. These courses in our college have been arranged thus:

Semester	*Course*
1	Principles of Geography
2	World Problems in Geography
3	Physiography
4	Geography of the United States and Canada
5	Geographic Influences in American History
6	Geography of Latin America
7	Geography of Europe
8	Economic Geography

As stated previously, courses 1 and 2 are prescribed for all college freshmen preparing for teaching in the secondary school, irrespective of the special work which they will choose at the end of the freshman year.

The practice teaching in geography is done in either the seventh or the eighth semester.

Readers of this article may note that no course in methods or techniques of teaching geography is offered for students preparing to teach in the secondary school. Whether or not one should be offered is a moot question. The principle underlying this curriculum is that each course is a professionalized course. "Any course that does not carry an actual or a potential increment of functional service for a prospective teacher cannot be justified in a teacher-preparation curriculum. In other words scholarship and culture are to be attained through the realization of a vocational purpose and not through general knowledge."[1]

One might question the advisability of placing the course *World Problems in Geography* so early in the curriculum as the freshman year. Possibly the student is better able to appreciate and to interpret the world problems geographically if, prior to taking up the current problems, he has acquired a knowledge of geographic environment gained by a somewhat intensive study of various regions of the earth. However, since nearly three-fourths of our students will not choose geography as a special field, and, therefore will have

[1] Report of the General Curricular Revision Committee, March 18 and 19, 1926, Harrisburg, Pennsylvania.

little opportunity to acquire this phase of cultural background which every citizen should have, this course has been placed in the freshman year.

The annual conferences of the geography faculties in teachers colleges of Pennsylvania have dealt chiefly with outlining objectives and procedures to be followed in reaching the objectives in each course. These syllabi, with lists of equipment and books which aid in reaching the objectives, are in the geography department of each of the teachers colleges of the state.

During the year 1931 further readjustments were made in all curricula of our teachers colleges effecting changes in geography along with changes in other subjects. Two of the factors which have been influential in bringing about these 1931 readjustments are: (1) the looking forward to the time when not fewer than four years of work beyond the high school will be required for certification to teach in any school in Pennsylvania and (2) the belief that more flexibility and wider choice of courses within each field is advisable.

As a result of these 1931 readjustments, a few changes have been made in the required courses in geography in the four-year curricula for teachers.

A. For teaching in the elementary school
   I. For teachers preparing for the *kindergarten* or for *primary grades*
      *1. Principles of Geography
      *2. Geography of the New World
   II. For teachers preparing for the *intermediate grades* (Grades 4, 5, 6)
      *1. Principles of Geography
      *2. Geography of the New World
      *3. Geography of the Old World
   III. For teachers preparing for the *rural school*
      *1. Principles of Geography
      *2. Geography of the New World
      *3. Geography of the Old World

B. For teaching in the *secondary school*
   I. For all teachers preparing for the secondary school
      *1. Principles of Geography
      *2. World Problems in Geography
   II. For special teachers of geography
      **1. Principles of Geography
      **2. World Problems in Geography
      3. Physiography
      **4. Geography of the United States and Canada
      **5. Geography of Europe
      **6. Geography of Latin America
      **7. Geography of the Pacific Realm
      8. Geographic Influences in American History
      9. Climatology
      10. Economic Geography

The single star (*) indicates a course in geography required of all students preparing for the type of teaching service under which the name of the course appears. The double star (**) indicates a required course for a student specializing in geography.

In addition to the starred courses, each student selecting geography as a

special field is required to take any two of the other four courses listed. Furthermore, since he has two free electives during his four years, he may choose to use his free electives in geography, taking the remaining two courses if they are taught during the semesters in which he has his free electives.

Two of the teachers colleges of the state, in one of which the writer has the geography work, have distinct commercial departments. In the curriculum of this special department, six semester-hours of geography are required. Two specialized courses emphasizing economic and commercial geography are given for the students in this Department of Commerce.

The objectives for geography in the Pennsylvania teachers colleges have been stated as follows:

1. To acquaint the student with the nature and function of modern geography.
2. To familiarize the student with as many geographic factors and principles as time permits.
3. To make known to the student the objectives in teaching geography in the elementary school.
4. To train students in the organization and presentation of suitable units of work.
5. To give training in the efficient use of geographic tools.
6. To acquaint the student with the sources of materials which may be used to vitalize the work in geography.
7. To arouse a wholesome enthusiasm for geography.

As one of the teachers of geography in the teachers colleges of Pennsylvania, I may say that we lay no claim to an ideal curriculum in geography. Among ourselves we are not agreed that we have the best possible curriculum, but we continually strive to give geography an opportunity to function in education, particularly in those phases in which it can accomplish certain educational objectives more efficiently than any other school activity.

DO HIGH SCHOOLS WANT TRAINED TEACHERS OF GEOGRAPHY?

CLYDE EDWARDS COOPER
OHIO UNIVERSITY, ATHENS, OHIO

FOR more than ten years I have been training young men and women for the profession of geography teaching. It is a comparatively easy matter to interest college students in the work and to attract majors to a geography department. In fact, a department can soon be "swamped" with majors in geography, if the conscience of the instructor will permit. We find, however, that much as we would like to make our departments serve larger numbers, we dare not do it because of the difficulty in "selling our product."

This difficulty does not arise through the inferiority of teachers prepared in the various under-graduate departments of geography, nor from a lack of worth-whileness of our subject.

Surely the product of our departments will compare favorably with that of departments in other subjects, and the value of training in geography is without question. The difficulty arises, rather, from the seeming indifference of city superintendents to the preparation of those who shall teach geography; from a crowded curriculum which causes a harassed superintendent to neglect geography in the high school; or from the fact that city superintendents may be unaware that colleges are preparing special teachers of geography. Other troubles seem to be that although many of our high schools are departmentalized, a sort of seniority rule makes it impossible to create room for the younger and better prepared teachers of geography. The older teachers in a system may like to teach geography and, regardless of their lack of training in the subject, keep their places.

For example, four years ago we sent a major in geography, a splendid young woman of more than average ability, to one of our largest Ohio cities, supposedly to teach geography. For three years she was forced to teach almost everything but the subject in which she had specialized. The result was that she spent a very unhappy three years, and surely years not advantageous to the children under her care. Fortunately, this year she *inherited* a geography position. However, she would have made a much more successful teacher of geography had she obtained such work when fresh from her special training.

In the face of these difficulties, I have not the heart to encourage any but the most promising students to major in geography. Many will say that that is as it should be; that we should not encourage any but those who show unusual ability in their beginning work. Personally, I do not claim to have the ability to select from beginning students those who will make good, nor the failures. I have tried to do it and have found myself mistaken time and time again. A student recently graduated with a major in my department who started with D grades. We tried to discourage him from specializing in the work, but he persisted and after the first year received nothing but A's and B's. He is now a successful teacher. It may be the function of a teachers college to keep some people from teaching, but one should not be too critical in making the selection from Freshman classes, at least, as to which student shall be encouraged to major in a stated subject. We ought to take all who show sufficient interest in our work and open the doors of geography to them.

What can we do as enthusiasts for geography to open more positions in both our junior and senior high schools and to get better teachers of the subject into the positions now available? We must work through the city superintendents. Unless we can make them see the need of geography in the high schools and that trained teachers of geography are necessary for the work just as much as training is necessary for history and English, our case is hopeless. In Ohio we are getting a little help from the State Department of Education, which seems to be making the requirements for teaching and for entrance to teachers colleges include more geography.

Permit me to cite the conditions at

my institution, for I believe them to be typical of the United States as a whole. Nine years ago we started building a geography department. Our President believes in the subject and gives the department every possible support. We wished to find out, first, what the demand would be for our product if we trained students to be special teachers of geography. A questionnaire was sent to each city superintendent in Ohio, in which he was asked if he could use such teachers if they were available. The answers were 90 per cent favorable. (See Bulletin of Educational Research, Ohio State University, May 30, 1923.)

With this encouragement we started to build the department of geography which our institution now has. It is to meet three needs:

1. To train special teachers of geography through four years of work.
2. To offer courses in professionalized subject matter for general teachers.
3. To offer cultural courses for the students of the College of Liberal Arts.

Our department has reached the stage where it graduates about ten majors and as many minors. A major is required to take thirty hours of geography and a minor, fifteen. Either group is prepared to handle straight geography work, or such teaching plus a minor, usually history. I believe that there are many colleges in the United States now doing about the same thing in their under-graduate schools.

The problem is how to place these teachers in at least part-time geography work. I was told by one of our city superintendents that it was his belief that city superintendents, in general, were not aware that special teachers of geography were being prepared and were available. Accordingly, I recently wrote personal letters to each city superintendent briefly describing our efforts to train such teachers and calling attention to the young men and women we had ready to go out. But few answers were received and little results came from them.

Are not our under-graduate departments of geography up against a wall? Can it be useless to spend four years preparing a young man or woman to teach geography unless they are financially able to go on with graduate work? And where are the products of our graduate schools to find positions as soon as the colleges are equipped? There is one consolation in preparing a well-trained teacher of geography. That is, that you have broadened him culturally and practically so that he will probably make a better teacher of history or social science than he would have been had he majored in history, economics, or some other social science.

VISUAL INSTRUCTION IN NEW YORK STATE SCHOOLS

A. W. Abrams
DIRECTOR OF VISUAL INSTRUCTION DIVISION
NEW YORK STATE EDUCATION DEPARTMENT

BY request I am undertaking to give some account of visual instruction in the schools of New York State as conducted by the Visual Instruction Division of the State Education Department.

The New York State Legislature began as early as 1885 to make annual appropriations for this activity. At the outset, and for all the years following, the pictures provided by the State have been chiefly in the form of lantern slides. For many years these slides were organized into fixed sets, mostly travel selections, which were sent out to borrowers accompanied by "canned" lectures. The sets were intended to be popular in character and were organized and lent without any view to classroom instruction. The chief beneficiaries of the service were the cities and the larger villages that employed a superintendent of schools. The sets were deposited with these school systems and no attempt was made to supervise the use of the slides, which were commonly presented to masses of pupils or to adult audiences in a general assembly room. The schools receiving these sets were at no expense, as even the projection apparatus itself was provided by the State. They considered that they were favored by being furnished with the slides and the superintendent found it convenient to have the sets at hand whenever he might wish to offer an illustrated lecture. The Bickmore lectures, as they were called, were popular and doubtless served a useful purpose when the plan was first inaugurated. They had but little influence upon the regular work of the classroom and after a time doubtless lost some of their earlier popularity.

Since 1910 an entirely different conception of the function of these state aids has been entertained. The sets which had from year to year been furnished the schools were recalled and an attempt was made to regulate loans according to the use of them that the Division intended to develop. At the same time, the slides were made directly available to all classes of schools and to organizations. The bulk of the loans continued for a time to be made chiefly for mass instruction, although the desirability of a systematic use of screen pictures in the classroom as a regular means of instruction was early recognized.

From the outset the State has produced from state-owned negatives the slides it circulates. These negatives have been procured with ever-increasing care to see that they are excellent in quality, rich in content, and especially adapted to aid in teaching the fundamental subjects of the school course. This procedure is perhaps a unique feature of the New York State

policy. The slides which reach the schools can be no better in quality, no more significant as to content, and no more pleasing pictorially than the negatives from which they are made. The Visual Instruction Division keeps in mind that in providing visual aids to instruction, the State Department of Education should set up high standards of picture expression. It is also recognized that the cost of making a slide from one negative is the same as that of making a slide from another negative, and that at the same time the character of the entire collection of slides used by schools is determined by the negatives used. For the most part only original negatives of the highest quality are procured by the Division; its negatives are rarely made from photographic prints.

As many duplicate copies of the slide are made as the growing demand requires. Being in possession of negatives, the Division is able to produce additional slides promptly and to maintain a uniform standard of composition and quality. The Division delivers at the time wanted fully 95 per cent of the slides applied for.

While the Division continues, so far as practicable, to make loans to organizations and for popular lecture purposes, effort is directed almost solely and constantly toward providing picture expression for use in the schools of the State. Less than 5 per cent of the loans for the past year were made to borrowers other than schools. In this respect a marked change has developed in the service of the Division during recent years.

Loans are made for two periods, differing in length. A period of one week is allowed without the imposition of any conditions. This period is adequate for a borrower who wishes to present an illustrated lecture or to use slides merely as supplementary aids to instruction.

It has been recognized, however, that for certain subjects, such as geography and history, what may be regarded as a basal use of screen pictures, which is more systematic than the supplementary use, is desirable. Accordingly loans are made for a period of one month to a registered class. It is assumed in such a case that the teacher is to become thoroughly familiar with the pictures and is to determine in advance the lines along which a lesson is to be developed. To make this preparation she needs to have the slides in her possession for a longer time. Furthermore, it is recognized that she should have a picture at hand ready for use at the time when the topic she is to teach by its aid is first being presented.

For registration certain definite conditions are imposed. In the first place the classroom in which pupils are regularly seated must be properly equipped with opaque shades for darkening the room, with a standard reflecting screen at least six feet square permanently installed, with a convenient outlet for electric connection and with a stand or table of suitable height for operating the lantern placed above the level of the heads of the pupils when in their regular seats. In other words, it must be possible at any time during a recitation period with a minimum of time to project the picture, make the needed observations and then go on with the remainder of the class exercise. A projection lantern can be readily moved from one room to an-

other, but this is not true of the screen required. No rule is made as to the number of lanterns a school shall possess. If the school is conducting this work according to the plan of the Division, it recognizes when it is advisable to provide additional projectors. Many schools of the state now own from two to five projectors per building. The unit of registration is the class and not the school as a whole, and furthermore registration is by subject as well as by grade.

The applicant for registry must also agree to make use of the State slides regularly and systematically, month by month, throughout the school year for a minimum of 25 per cent of the entire class time. In actual practice most of the classes that are registered devote a larger proportion of the class time than this in teaching through the aid of screen pictures.

Fifteen years ago there was scarcely an elementary classroom in the State that had been provided with the required equipment. At the present time there are approximately 2,000 fully-equipped classrooms and the number is constantly increasing. School administrators, when this matter of equipment is first considered, are likely to think that the cost of equipping each classroom is prohibitive. They are, however, encouraged to recognize the advisability of beginning the development of a program of visual instruction by equipping properly a few rooms and thoroughly supervising the work in them, in order that they may know from experience what results are possible and thus have a sound basis for determining whether it is advisable to equip additional rooms. Rarely does a school that has followed this procedure for a year abandon the work or fail to go forward. Entire school systems have now equipped practically all classrooms in the elementary schools and many of those in high schools. The equipment required lasts for many years. The expense can be distributed over a number of years. It would be most uneconomical to move pupils to an auditorium or to a special projection classroom for the use of screen pictures. Besides, it is inevitable that when a teacher must consume considerable time bringing equipment and pupils together, she will fail to use the pictures when they are most serviceable and that she will devote a whole period to a somewhat rapid showing of a large number of pictures.

There is another reason why the Division recommends that this systematic work in visual instruction should be started at first in a small way. The technique of using picture expression in teaching is entirely different from that of the ordinary classroom procedure. It needs to be acquired by teachers through study and experience. The chance of success with this means of instruction is much greater if a school does not undertake to do too much at the outset.

A picture expresses only objective facts. It is specific in character. Visual instruction is inductive. The method of procedure requires specific observation, involving not only sense perception but the discussion and interpretation of what is observed. The showing of many pictures accompanied by the reporting of information gained from books or from the teacher is not real visual instruction. Picture expression is an economic aid in teach-

ing and in learning only when the limitations and peculiar values of picture expression are fully recognized. Observing and interpreting pictures requires real mental effort on the part of both teacher and pupil. The use of visual instruction should not be undertaken until the teacher has a clear conception of what is involved.

In describing the New York State program, I should add that loans are in no case made to the individual teacher. The property of the State is furnished free to boards of education. It is necessary that the administrative head of the school should represent the board of education in ordering slides and should show that a supervised program of visual instruction has been officially adopted.

More slides are lent for geography than for any other subject. Geography deals very largely with objective phenomena. The study of almost every phase of the subject can be aided by a proper use of suitable pictures. Besides, with the appearance of the earlier part of a new state syllabus in geography about four years ago, the Division began to cover this course with selected slides grouped by topics. For third grade geography 340 slides are now available, for fourth grade geography 475 slides. A collection of about 1,000 slides on North America, including 300 on New York State, which is the field of study in the fifth grade, is nearing completion. The Division will continue to concentrate attention upon geography until the elementary course in this subject has been fully covered. When completed, the entire collection should include approximately 3,500 slides, well balanced, excellent in quality, and rich in significance. Many map slides, made from special drawings, simple, adapted to the work of the several grades, and legible without eye-strain throughout the entire classroom as to every detail shown, are included in the collection.

It is no longer needful to urge upon schools of New York State the importance of a definite program in visual instruction. The number of registered classes and the aggregate number of slides lent is rapidly increasing. The Division furnished last year 1,146,000 slides, the majority of which were used intensively, a few at a time, in thoroughly equipped classrooms, to train pupils and carry out the course of study in fundamental subjects. This is a gain of 60 per cent in the last five years. The registered schools and school systems last year received from the Division, on the average, approximately 5,000 slides each. The State aims to provide teaching aids of intrinsic merit. It is warranted in doing this only if the school people themselves make effective use of these aids. The Visual Instruction Division is not merely a lending review. It needs to create the collection of teaching aids it circulates. It adheres closely to a carefully conceived plan for the use of these aids and is content to render service to those schools that are willing and able to meet the conditions prescribed.

A CRITICAL ANALYSIS OF SIX GEOGRAPHY TEXTS PRINTED BEFORE 1850

DeForest Stull
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Introduction

THE writer's first problem was to make a selection from the large number of books available. Forty books which had been printed before 1850 were found in the Teachers College Library. Inasmuch as several of these books represent different editions of the same texts, and there is a large amount of similarity in the books, only six have been listed in the bibliography. Further, the dates for the six selected books are well distributed over the survey period.

He further decided that it would be a good thing to apply modern criteria for evaluating textbooks and constantly kept in mind and made mental comparisons with modern series of textbooks. Hence the listing in the bibliography of such modern series and books on how to judge textbooks.

The Place of the Geography Textbook in American Schools

A few statements regarding the place and use of geography textbooks in American schools may not be out of place. Textbooks play a very significant part in all geography work. According to the findings of the Bureau of Curriculum Research of Teachers College, they have been the most important factor in determining courses of study. They contain the main collection of reading materials, maps, pictures, diagrams, graphs, and statistical material available for the great majority of teachers and pupils alike. Fortunately, or unfortunately, most teachers, and consequently most pupils, would be lost without the textbook. It has been discovered that teachers want a textbook even on the opening day of school.

Reading Matter

First criterion:—The reading matter should appeal to children. Our modern textbooks in geography are now being written by people who understand children. Were the older books appealing? Not if the writer is a good judge! All of the books examined were decidedly uninteresting, encyclopedic in treatment, and the language seemed to be beyond the comprehension of the children for whom they were intended. Consider the following selections:

"Egypt is 600 miles long and 250 broad; it has the Mediterranean on the north; the Red Sea on the east; Ethiopia on the south; and the desert on the west. The soil is fertile, occasioned by the overflow of the Nile; but the climate is hot, . . ." and so on indefinitely. Would the average child be inspired by such material?

Further, much of the written material was descriptive in nature, and some books were made up entirely of questions and answers to be memo-

rized. In modern geography, the *what*, the *where*, and the *why* of man's interrelationships with his natural environment are emphasized and very much attention is given to causes. One looks in vain for causal geography in the older books. Consider the following selection:

"What is geography? Geography is the description of the earth and its inhabitants.

What is a continent? A continent is a portion of land surrounded but not divided by water.

What is an island? An island is a portion of land, less than a continent, surrounded but not divided by water."

Page after page of such material is to be found in Blake and others. The writer can imagine that the poor children would be highly enthusiastic about their work! Some of the written material is quite amusing. It reminds one of the time when children were taught to sing the capitals of the various states.

Geographical Rhymes

(*To be repeated by the pupil*)

"The world is round and like a ball
  Seems swinging in the air,
A sky extends around it all,
  And stars are shining there.

Water and land upon the face
  Of this round world we see,
The land is man's safe dwelling-place,
  But ships sail on the sea.
Two mighty continents there are,
  And many islands too,
And mountains, hills and valleys there,
  With level plains we view.

The oceans, like the broad blue sky,
  Extend around the sphere,
While seas, and lakes, and rivers lie
  Unfolded, bright and clear.

Around the earth, on every side,
  Where hills and plains are spread,
The various tribes of men abide,
  White, black, and copper red.

And animals and plants there be,
  Of various name and form,
And in the bosom of the sea
  All sorts of fishes swarm.

And now geography doth tell,
  Of these full many a story,
And, if you learn your lessons well,
  I'll set them all before you."

Textbook Pictures

Second criterion: — A geography textbook should contain carefully selected pictures. Pictures are very valuable in all geography work. It cannot be too strongly emphasized that modern authors and publishing houses have gone to considerable trouble and expense to secure reliable, recent, and worthwhile pictures, in the hope that they will be wisely used. The reader is here referred to any of the modern textbooks lists. What about the older books? Pictures are conspicuous by their absence. Even when present, they are merely highly fantastic drawings. Of course, one should not be too critical here, because the modern photographic and lithographic arts were not developed until long after the period under review. How could children have been expected to develop a critical attitude toward pictures, as we now expect them to do, if such pictures were impossible to produce?

Textbook Maps

Third criterion:—A geography book should contain many maps of different kinds. Above all, a good geography textbook should contain excellent maps. This should be true if for no other reason than that the textbook maps

may be the only ones available for teachers and pupils alike. Maps constitute a very valuable part of the language of geography and as such should be often and carefully used. The reader is here referred to the excellent maps in some of our more recent geography texts. Further, the teacher should realize that there are literally hundreds of different kinds of maps. If the proper data are available, anything which is distributed over the face of the earth may be mapped. There are maps which show temperature, rainfall, political boundary lines, communication, pressure and winds, vegetation, products, density of population, commercial development, and hundreds of other facts of location and distribution. Further, maps may be used for purposes of comparison and studies made along this line are very worthwhile. Likewise, maps should be used for purposes of location.

What about older books? Again, maps are conspicuous by their absence. Some of the books did not contain a single map. Even when present, they were highly fantastic and inaccurate political maps, without proper direction marks, scale, and legend. Again, one must not be too critical. The modern cartographic art had not yet been developed.

Textbook Diagrams

Fourth criterion: — The textbook should contain helpful diagrams. The writer has before him one of the leading textbook series in geography. It is filled with helpful diagrams. There is, for instance, a diagram to illustrate various positions of the earth in its revolution around the sun. A careful examination of this diagram should enable one to secure an understanding of the causes of the seasons which otherwise could only be obtained from many pages of written material. Again, there is a diagram showing how the streets in a city are named. This will lead naturally to the difficult but interesting and valuable topic of latitude and longitude. Then there is a diagram to show the movement of the greater winds of the earth. Winds offer a very difficult topic under any circumstances, and are almost impossible to present successfully without diagrammatic representation. In addition, there are hundreds of other diagrams which the authors hope will be used.

Do the older books contain diagrams? Again, the old statement holds. Diagrams are conspicuous by their absence. Here, too, one should not be too critical. Geographical knowledge has made wonderful progress since 1850, and the understandings necessary for the construction of helpful diagrams had not yet been discovered.

Textbook Statistics and Graphs

Fifth criterion: — Textbooks in geography should contain up-to-date statistical material and graphic representation of the same. Modern governments now publish much very valuable statistical geographical material, and statisticians have developed methods for their graphic representation. What about the older books? Not a single graph was to be found, and undoubtedly much of the statistical material was based on conjecture. Again the caution, let us not be too critical.

Mechanical Makeup of the Textbook

Sixth criterion:—Textbooks in geography should pay attention to attractiveness and hygienic utility in mechanical construction. Modern textbook makers spend thousands of dollars to make their books attractive and have availed themselves of scientific studies to make them hygienically useful. For this part of the study, the writer is especially indebted to the findings of Dr. Florence Bamberger's study on "The Effect of the Physical Makeup of a Book upon Children's Selection." (See bibliography.)

1. "Size appears to be a factor in book selection. The small, diminutive volume does not appeal as strongly as a larger book. . . ." The newer books meet this criterion. The older books were all very small, several being about the size of handbook Testaments.

2. "The cover appears to be a factor in determining children's selection. The color of the cover exerts an influence. Brightness is a pleasing factor for children. Blue, red and yellow are favorite colors for covers." Modern textbooks meet this criterion. The older books were covered with paper in some instances; others had wooden covers, with probably unattractive leather on the outside. The original color of the leather was not distinguishable.

3. "Titles are an additional factor in influencing selection." Attractive titles and cuts are to be found on the outside covers of modern textbooks. Most of the older books had no outside title.

4. "The short interest span of children seems to be a psychological explanation for their preference for not many lines on any one page." Many of the older books were printed with very fine type, which would not appeal to children and which must have been very injurious to the eyes.

Textbook Table of Contents and Index

Seventh criterion:—A textbook in geography should have a carefully worked out table of contents and an index. Modern textbooks meet this criterion very well. Most of the older books had no index whatsoever, and some were without a table of contents.

Conclusion

The textbooks in geography published prior to 1850 were dull, uninteresting, unattractive, mentally unstimulating, and generally unfitted to the uses for which they were intended. Modern textbooks in geography are superior in every respect.

Bibliography

Modern textbooks:—

Barrows and Parker Series. By Harlan H. Barrows and Edith P. Parker. Silver, Burdette and Company.

Branom and Ganey Series. By Frederick K. Branom and Helen M. Ganey. W. H. Sadlier Co.

Dodge and Lackey Series. By Richard E. Dodge and Earl E. Lackey. Rand McNally and Company.

Earth and Its People Series. By Wallace W. Atwood and Helen G. Thomas. Ginn and Company.

Essentials of Geography. By A. P. Brigham and Charles T. McFarlane. American Book Company.

Human Geography. By J. Russell Smith. J. C. Winston Company.

McMurry and Parkins Series. By Frank M. McMurry and A. E. Parkins. The Macmillan Company.

Our World Today. By DeForest Stull and Roy W. Hatch. Allyn and Bacon.

Source material for evaluation:—

Evaluating School Textbooks. By John Guy Fowlkes. Silver, Burdette and Company.

Textbook Selection. By R. H. Franzen and F. B. Knight. Warwick and York.

The Selection of Textbooks. By C. R. Maxwell. The Macmillan Company.

The Effect of the Physical Make-Up of a Book upon Children's Selection. By Florence Bamberger. Johns Hopkins Press.

Texts examined critically:—

Elements of Geography, Designed for Young Students in that Science. By Benjamin Workman. John McCullock.

Geography Made Easy. By Jedidiah Morse. Parker and Bliss.

Elements of Geography, Ancient and Modern. By J. E. Worcester. Timothy Swan.

Geography for Children. By J. L. Blake. Richardson, Lord and Holbrook.

A Geographical View of the World. By Rev. J. Goldsmith. American edition by James G. Percival.

THE MEASUREMENT OF ACHIEVEMENT IN GEOGRAPHY

MENDEL E. BRANOM
HARRIS TEACHERS COLLEGE, ST. LOUIS, MISSOURI

IF all the factors that enter into an educational project were perfect in their functionings, the giving of tests would be superfluous. Because of the possibility that some of these factors may function imperfectly, the measurement of achievement is an important phase of an educational program. The chief purpose for which tests are used is to assist the teacher to give the pupil a rating of his standing in a course. The teacher who uses tests exclusively for this purpose, however, fails to realize some of the additional values to be derived therefrom. In a factory, when too many "rejects" are discovered, a careful survey of all processes is made in an attempt to correct the difficulty. The teacher, in an analogous fashion, should attempt to discover and remove causes of unsatisfactory results revealed through tests. These causes frequently are poor teaching methods, inadequate equipment, or lack of application of pupils to the work. If some of these causes cannot be removed immediately, or if there is some permanent hereditary handicap, the teacher at least can shape her work with a view of minimizing such obstacles to progress.

Broadly considered, tests may be classified as (1) objective tests and (2) subjective tests. The subjective test, practically considered, performs its most useful function as an organization test. At the close of a study of the Great Plains, the teacher may have the students write on the question, "Why is grazing the leading industry of the Great Plains?" The students, in order to meet this challenge successfully, will need to select and organize relevant facts. The question should result in marked mental activity, but if it has already been discussed in class, the pupils will depend chiefly on memory. If the question has not been discussed in class, but requires the abstraction of relevant facts from various class discussions,

a higher order of reaction is required. The teacher need not spend much time in getting ready for such a test. She must spend much time, however, in correcting the papers, and, even then, in the absence of definite objective standards, she will be at a loss to know exactly what the paper is worth. Under such conditions, the pupils wonder what the teacher will give them, and not infrequently accuse her of partiality. The subjective judgment of the teacher, as a specialist, should be a fairly reliable index of the pupil's achievement, and should enter into the composition of the final grade of the pupil. It should be distinctly understood, however, that such a grade is reliable only to the extent that the judgment of the education specialist can be trusted. The resulting grade is not the grade that every teacher would give, but the grade that a particular teacher gives. It is possible that further refinements in the field of testing will permit the giving of organization tests that can be objectively graded, but suitable score cards, thus far devised, are too complex for practical use.

Objective tests, in contrast to subjective tests, require considerable time to prepare. Subjective tests require much time of the teacher after the tests have been given; objective tests require much time of the teacher prior to the giving of tests. Objective tests, if multiplied sufficiently, can be filed away for subsequent use, changes being necessary only when the content or purposes of the course are changed. Objective tests, adequate in nature, are not easily constructed, which has prompted some teachers to depend on printed forms. The grading of objective tests can be done by any person who is reasonably accurate in using the key. The subjective judgment of the teacher does not count. The pupil does not raise the question, "I wonder what the teacher will give me?" but "I wonder what I shall get?" The two most commonly-used types of objective tests are (1) some form of the missing word test, and (2) a choice of answers test. These two types of technique permit the testing of practically every kind of content included in a geographic unit.

There are various skills and ideals, the teaching of which is shared in common by the teachers of different subjects. These all-pervasive skills and ideals are so important that tentative attempts have been made to measure them in each subject. Each subject, in addition, has its own particular field of content. The most substantial progress in the measurement of achievement in geography has been in the field of content. Since maps and globes are considered special tools of the geographer, supplementary emphasis has been placed on a knowledge of their uses. Since geography has a special mission to perform in the education of students, tests should also be constructed to discover whether a student is geographically minded.

Objective tests in geography should include (1) the location of places, (2) facts about places, and (3) interpretations of the adjustments of man to his environment. The reality of existence of geographic situations is best appreciated if each interpretation is definitely related to some part of the earth. The necessity of differentiating physical forms and cultural features has led to a multitude of place names.

Some places relatively are much more important, to people in general, than other places. The teacher should discover which places should be given major emphasis and which places should be given minor emphasis. The pupils should be able to locate the more important places with reference to related physical features and political areas; the pupils should be able to appreciate the locations of less important places, or should be able to find such locations on maps. The former type of recall may be thought of as unassisted memory recall; the latter type of recall may be thought of as assisted memory recall. The question, "On what lake is the city of Chicago located?" is an example of a part of an objective test involving unassisted memory recall. The question, "Is Vincennes located on the Kaskaskia, White, St. Joseph, or Wabash river?" is an example of assisted memory recall. The teacher may also provide for a third group of place names, which represent places, a certain proportion of which each pupil should be able to locate on maps. She may require, for example, each pupil to be able to name the country in which at least each of two of the following cities is located: Tucuman, Concepcion, Sucre, Iquitos, Bolivar, and Arequipa. Since most of the pupils will not have occasion to locate places without assistance from maps and descriptions, it is far more important that they should be able to follow appreciatively the place concepts of a book, article, or address, or to use an atlas effectively, than that they should be able to draw maps and locate places from memory.

The geographer discovers how man adjusts himself to his environment and explains why these adjustments have been made. Relative values should be considered in the selection of facts for emphasis, just as in the selection of places. A choice of knowledge of comparable facts should be given with reference to less important facts. The well-educated man should have a mass of facts, many of which are of minor importance, at his disposal. Minimal essentials should be required of all, but, as has been pointed out, these essentials should include only the very important places, facts, and interpretations. In addition to the essentials of geography, there are many minor facts and interpretations that are interchangeable in value. Minimal essentials tend to conform all individuals to the same mold; additional knowledge tends to differentiate individuals so that each person expresses himself as a distinct personality. Under this proposed plan, the test exercises are longer than in the kind of test generally given, but the total required reactions of the pupils need be no greater. If teachers stress only minimal essentials, pupils will tend to imitate the teachers. Frequently the teacher does not discriminate between the minimal essentials and additional interchangeable knowledge. The pupil, under such conditions, does not have an opportunity to show that he knows something just as important, and is therefore given a lower rating than he deserves.

The following example of a short test on the country of Chile illustrates the proposed differentiation between minimal essentials and additional interchangeable facts:

Minimal Essentials.

1. Name the leading seaport of Chile. .....
2. Name the capital and leading city of Chile. .....
3. The transcontinental railroad extends across what mountains? .....
4. Name the leading mineral port of northern Chile. .....
5. Name the leading metal secured from Chile. .....
6. Name the chief kind of fertilizer exported from Chile. .....
7. What strait helps to increase the importance of Chile? .....

Additional Test Questions (*Answer any three*).

1. Name the most important inland copper center of northern Chile. .....
2. What settlement of Chile is known for the mining of coal? .....
3. What city, on the northern margin of the forested belt, is known for the manufacture of lumber? .....
4. Name an important by-product of the fertilizer industry? .....
5. Name the northernmost seaport of Chile that is connected by rail with Bolivia. .....
6. What island, off the coast of Chile, is associated with the story of Robinson Crusoe? .....

The interpretative type of objective test can best be expressed through a choice of answers. The response to the interpretative question hardly can be controlled sufficiently to utilize the missing word test. Expressed in its highest form, the interpretative question involves a choice of answers, each of which might enter into consideration as a possible answer to the question. The interpretative test may be a best answer test, in which each statement helps to explain the question raised, but one statement is the most significant. The following example illustrates the nature of the interpretative type of question:

Place a cross before the best answer to the following question: "Why is grazing the leading industry of the Great Plains?"

...1. There is an abundance of grass.
...2. The climate is favorable for grazing most of the year.
...3. Man has not been able to find a better way to use the resources.

There is a distinct tendency to organize geographic materials in large units. For example, much of the geography of the Southern States can be taught in relation to the question, "Why is cotton the chief money crop of the South?" The construction of a fairly comprehensive test to accompany such a presentation involves a consideration of the places, facts, and interpretations that should enter into the discussion. Emphasis is placed on the analytical contents of the unit, and the various forms of objective tests are used in any order as needed to develop the content in a logical manner. The complex test, in which technique is subordinated to content, helps the students to think through the unit of work in an orderly and systematic manner.

In preparation for the teaching of a unit of geography, the teacher should (1) evaluate the content, (2) organize the content with reference to the interests of the pupils and progression in the work, and (3) construct or secure tests that will measure the achievement of the pupils with

reference to the results that she hopes to secure. The grading of the test papers will reveal the degree of mastery of the pupils; a diagnosis of the responses should assist the teacher to improve her teaching technique. Objective tests, if feasible, should be given. The time and energy that the teacher can save in giving objective instead of subjective tests will enable her to devote most of her attention to the teaching processes.

THE WORK OF THE EDUCATIONAL RELATIONS COMMITTEE OF THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS

ERNA GRASSMUCK
STATE TEACHERS COLLEGE, INDIANA, PENNSYLVANIA

AS society becomes more complex the need for coördinating various agencies and activities becomes greater. Realizing the significance of coöperation, the Executive Committee of the National Council of Geography Teachers authorized, several years ago, a Committee on Educational Relations. The Committee assists local, state, national, and international groups in organizing local, district, and state geography clubs and councils. A file of the programs and publications of the various clubs and councils is maintained. At the request of any educational group, topics are suggested and assistance rendered in procuring speakers for the meetings. Supervisory and administrative officers are using the consultative services of the Committee because various aids are available for them. In addition to the Committee members, the various State Directors of the National Council serve as intermediaries in this matter.

Coöperating with the National Education Association at its recent meetings in Los Angeles, the Committee organized programs for the two Geography Section meetings, June 30 and July 2. The local member of the Committee was Dr. George M. McBride of the University of California at Los Angeles. At the first session, Harold Fairbanks of Burbank, California, presided. Beeda Metcalf presented a demonstration lesson with a group of her Berendo Junior High School pupils. Then "Geography in Modern Curriculum Building," was analyzed by Harriet Elliott, State Teachers College, West Chester, Pennsylvania. In this way the clinical work conducted by Miss Metcalf could be fitted into the pattern of geographic education as evolved by Miss Elliott. But a geography teacher constantly desires first-hand information from the field. Dr. McBride's lecture, with lantern slides, on the "Lake Titicaca Region of South America" concluded a balanced program.

On July 2, Myrta Lisle McClellan, of the University of California at Los Angeles, was chairman. Vinnie B. Clark, of State Teachers College, San Diego, California, opened the session by discussing "What Constitutes Geography." The "Relation of Geography

to Business," by Dr. John B. Appleton of Scripps College, Claremont, California, followed. Thus, after Miss Clark developed the concept of modern geography, Dr. Appleton showed specifically how it functions in business affairs. As in the previous session, the "felt need" of sharing someone's field experience was satisfied by Dr. Otis W. Freeman, State Normal School, Cheney, Washington, when he discussed "A Geographer's Year in Hawaii."

The World Federation of Education Associations held its Fourth Biennial meeting in Denver, July 27 and August 1. Members of the Educational Relations Committee served as delegates from the U. S. National Council of Geography Teachers, as participants on various committees, and appeared together with educators from far and near on the programs of the Geography Department.

An international gathering is always inspirational to a geography teacher. Educators from five continents and several Pacific Island groups represented thirty-one countries. The paid registration numbered 3,834. But attendance at group conferences was open without charge to all persons, so that the total attendance was really larger.

On July 31, the first session of the Geography Department was devoted to "Elements and Possibilities of Geography That Aid in Teaching International Understanding and Cooperation."

P. Seshadri of the All-India Federation, Cawnpore, India, urged that the idea implied in the two words *barbarian* (the Greeks called all foreigners barbarians, meaning that they did not belong to their country) and *uncouth* (of English origin, meaning unknown) should be combated in Geography lessons. He said: "Geography today creates an interest in the people. In geography there is the opportunity to speak of the attractive things to be found in the world. It is possible to stress the wonderful phases of nature in the various parts of the world. The natural scenery and other natural phenomena of other countries are the outstanding features as one travels. A teacher who really feels an enthusiasm for the ideal of the League of Nations (Mr. Seshadri had just come from attending a meeting in Geneva) will view with joy the teaching of geography."

In his paper, H. L. Constable, of the Incorporated Association of Assistant Headmasters in Secondary Schools, Manchester, England, represented the views of geography teachers in different types of English secondary schools. They feel that there is only one economic unit,—the world itself. Mr. Constable stated that "An appropriate atmosphere of teaching to promote international sympathy can be created by a description of life and conditions in other countries, by an explanation of differing customs and by a syllabus of study which does not foster exaggerated nationalism. Geographical teaching is of use in setting things in their proper perspective." He urged special methods, as visits to foreign countries by teachers and pupils (the school journey), exchange of teachers and pupils, correspondence with pupils in foreign schools, visits to collections of foreign art and to educational films of travel and foreign life, talks by foreign visitors. The

paper was read by Miss E. A. Phillips.

Rowland Hall, of the National Union of Teachers, Manchester, England, emphasized the importance of having most skilled and trained teaching for children from three to seven years of age, to avoid formation of prejudices and wrong ideas. "Geography," he said, "can be used to inculcate a true religion of tolerance, understanding, and appreciation among the peoples of the earth. Racial prejudice is the big brother of class distinction." School journeys from England to the Continent, correspondence between pupils in different countries, exchange of teachers, "are all effectively creating an appreciation and recognition of qualities of peoples in other parts of the world."

According to R. Bennett Miller, President, Educational Institute of Scotland, Glasgow, "Two aspects are pursued in the study of geography in the modern way: (1) the consideration of place conditions, and (2) the consideration of the reactions and responses which man has been able to make to these conditions." He used most effectively his "own little land of Scotland" to make this analysis concrete. Mr. Miller said that "just because of the diversity of conditions and of people, there must be an understanding of this diversity; this understanding must be based on knowledge. If any part of the ideas and especially the ideals associated with the League of Nations is to be translated into reality, Geography as a science must have its proper place in the educational system of the world."

The discussion was introduced by E. E. Lackey, University of Nebraska, who is secretary of the National Council of Geography Teachers.

The second session, August 1, considered Methods of Teaching Geography to Promote International Understanding and Coöperation. Dr. C. J. Posey, University of Kansas; Erna Grassmuck, State Teachers College, Indiana, Penna.; W. S. Gard, American Junior Red Cross, Washington, D. C.; Florence Brewer Boeckel, National Council for Prevention of War, Washington, D. C., contributed addresses specific to the theme. Ella Huntting, State Normal College, Jersey City, New Jersey, led the discussion. Miss E. A. Phillips, Vice-Principal of Avery Hill Training College, Eltham, London, England; George Barker of State Teachers College, Greeley, Colorado; Dr. Ernest Horn of University of Iowa; and Dr. J. Russell Smith of Columbia University, who was chairman of both sessions, emphasized certain phases during the discussion.

The Geography Department voted approval of the exchange of international school correspondence and classroom material of the Junior Red Cross in forty-eight countries as a motivating force in the study of geography. Through the combined efforts of the Geography Department and of the Herman-Jordan Committee Number One, the following resolution was passed by the General Assembly: "That a committee be appointed to study geography materials and to compile a list of sources for geography teaching materials by countries, whereby more complete and accurate data may become available for schools and homes."

One of the most attractive features of the Conference was the exhibition

of dispatches to various parts of the world. Messages were telegraphed from the platform at one of the general meetings, and answers were received in a few minutes from many eminent educators in the United States, Europe, Asia, and South America.

Closer coördination between general educators, who see in geographic education means for a better understanding of life, and educators who are devoting their major efforts to studies in geographic education, will reduce waste of time and energy in curriculum construction and will raise the quality of the learning products in elementary and secondary schools, as well as in teacher-training and other collegiate institutions. Such coöperation is made more easily possible through the Educational Relations Committee of the National Council of Geography Teachers.

NEXT MONTH

ARITHMETIC NUMBER

Edited by PROFESSOR GUY M. WILSON

Number Facts in the Daily Papers.
Miss Florence M. Wheeler, Somerville, Massachusetts.

The Metric System in Metric Europe.
Professor Guy M. Wilson.

Denominate Measures in Four Industries.
Mary DeS. Louth, Psychological Examiner, Providence, Rhode Island.

An Appreciation Unit in Junior High School Mathematics.
Esther L. Wurl, Mount Ida School and Junior College, Newton, Massachusetts.

Useful Arithmetic and the Pupil.
Calista Roy, Assistant Superintendent of Schools, Newton, Massachusetts.

Useful Arithmetic and the Teacher.
Helen J. Piper, Intermediate Supervisor, Lynn, Massachusetts.

VALUE OF EDUCATIONAL TRAVEL FOR STUDENTS AND TEACHERS

LANGDON WHITE
WESTERN RESERVE UNIVERSITY, CLEVELAND, OHIO

NO one questions the value of field trips for advanced students. For many years, serious students, usually in small groups, have gone into the field for several weeks, and have made intensive studies of the geology and geography of restricted areas.

But within the past five or six years, a new type of field trip has been developing and it seems to be sweeping the country, for colleges and universities everywhere are taking part. Just how does this new trip differ from its predecessor? Primarily in objective and personnel. Instead of attempting to get the details of a small area, the group attempts to get the "feel" of a large one. And instead of its members consisting of graduate students, college professors, and advanced undergraduates, this new kind of trip has elementary, junior, and senior high school teachers, college students, and even recent high school graduates. In age they have varied from 16 to 80.

A question that might arise immediately is: how is it possible to get thirty people of all ages and from all sections of the country together and keep a harmonious *esprit de corps*? On the Clark University Transcontinental Field Trips of 1930 and 1931 our groups were made up of members from more than a dozen states and from Canada. While we have had an enviable spirit of cooperation and sociability, the writer is unable to tell *how* we got it. Our splendid spirit, however, was the admiration of nearly all who met us enroute. Possibly the explanati n lies in the fact that we were all college-bred, we all had a common interest — geography —, we all possessed enthusiasm, and we were all intensely *busy*. No one in our party was bored; he didn't have time to be.

Most of those who take these reconnaissance trips take them for credit, and this brings up an important point. Is it really possible for a person actually to *earn* six hours of college credit while riding on a bus, train, or steamship? It seems to the writer that this depends primarily upon the instructor—upon his aims, upon his ability to interpret what he sees, upon his skill in "selling" his subject to members of the party, and upon his enthusiasm.

In order to get a clear idea of the merit of getting college credit for such a trip, let us see what the students actually did on the 1931 Clark University Transcontinental Field Trip in Geography. First of all they spent two days on the university campus getting material from the library and attending lectures. An example of the latter was that given by Dr. Wallace W. Atwood, Director of

the Clark Graduate School of Geography, on Niagara Falls. He made chalk drawings on the blackboard to convey his principal points, with the result that every single student was able to understand the physiography of the Falls when we visited them the following day. Then when we stopped in cities where there were universities with departments of geography, we were favored by instruction from members of their staffs. In each National Park, the head ranger-naturalist was with us from the time we entered until we departed.

Each day a mimeographed list of questions was passed to each student. Nearly every question involved thinking — the application of geographic principles. For instance, the following two might be considered as typical—one dealing with the natural environment, the other with a human adjustment to some element of the natural environment:

(1) Which side of the Isthmus of Panama receives the more rain? Why? How would you be able to tell by making the trip through the Canal?

(2) The Chicago-Gary iron and steel district ranks second in importance to that at Pittsburgh. List reasons *why* you think iron and steel should be made here. What advantages has this district over Pittsburgh? What advantages has Pittsburgh over this district?

On some days there were as many as 25 or 30 questions. These had been made out, based upon previous travel and intensive library work on the part of the conductor.

Questions of the type noted above, give members of the party something definite to look for. They also keep everyone on the job. Moreover, throughout the day, whether on a train or in a bus, the instructor lectured when interesting and valuable phenomena appeared on the landscape. The field actually was our laboratory, where the adjustments being made by man to his natural environment were unfolded before our very eyes. We saw farming in all parts of the country, and we saw lumbering, fishing, mining, manufacturing, and commerce. We saw things that teachers had been handing to their pupils in a desultory sort of way for years, having gotten their material solely from books. We saw the interest displayed by those teachers when they actually saw these things with their own eyes; this year those teachers will handle geography in a different way. Their enthusiasm and knowledge will be reflected in the attitude and accomplishments of their pupils.

On the boat enroute home, where there was little to see except water, classes were held daily. At this time every single question, which had been on the daily guide sheets was discussed. At the termination of this work a final examination was given, but the questions were entirely new. Each question dealt with something we had observed on the trip—something that involved geographic thinking. For the most part, the results were highly satisfactory.

Nearly everyone has enough of the gypsy instinct in him to want to travel. Undeniably everyone *dreams* of taking a wonderful trip someday. But important considerations entering into such a trip follow:

(1) Intellectual gain. It is patent that one can get much more from a trip when it is under the supervision of one trained to interpret what he observes and who understands how to get those with him desirous of doing likewise. J. Russell Smith, eminent geographer of Columbia University, tells about two people who ride together: one of them knows some geography, the other does not:

"Both of these people look out of the car window at the flying landscape. They may both see its beauty, but to the one who knows the physical geography, *every line of the landscape and seam of rock also has meaning and is therefore an object of intellectual interest.* Scores of persons have told me that their understanding of the major principles of physiography has immeasurably enriched the delights of travel. The geographer indeed has a kind of monopoly advantage in travel. He sees all that the person without geographic understanding sees and he also sees an endless procession of geographic phenomena."

The writer wonders how one could get the *thrill* from Yosemite, who would enter it with no knowledge of glaciation. How could one fully appreciate Bridal Veil or Yosemite Falls without knowing what *hanging valleys* are and how they came into being.

(2) Contentment. When one travels, one wishes to be happy and contented. People possessing gregarious temperaments attain happiness most easily when associating with people of the same intellectual and cultural background. College-trained people invariably are interested in each other and in the same things.

(3) Low cost. When a group of twenty-five or thirty travels together, special rates and privileges are secured, and these are passed on to each individual. The universities and colleges which give these trips do not do so for profit.

In our Transcontinental Field Trip, every day brought something new and interesting. Space forbids an explanation of what the party was able to get, but here is an example. Let us be together for a moment as our train speeds across the Spring Wheat Belt of north central United States and the adjacent Prairie Provinces of Canada. We are on the plain of old Lake Agassiz. Nearly everyone in our party had heard of this lake, but few knew where it was, how it got there; and when it disappeared. This was a good time to give a lecture on Lake Agassiz. The conductor emphasized the fact that this Lake, larger than the combined areas of all the Great Lakes today, had been formed in the valley of the Red River of the North, which, where we crossed it, was a tiny insignificant looking little stream. The lake came into being when the edge of the retreating ice lay north of the lake, and blocked drainage in that direction. The water rose and rose until it spilled over—overflowing into the Minnesota and thence into the Mississippi. Eventually, the ice dam at the north melted back and a new and lower debouchure was opened to Hudson's Bay. This eventually drained the lake, leaving only a few remnants, such as Lake Winnipeg, which occupy the deepest parts of the old Lake.

With the movement of the American frontier westward, immigrants poured into the region and soon discovered that the environmental conditions, consisting of fertile silt and clay loam soils, level topography, short frostless season and ample rain, were well suited to the growth of a superior grade of hard spring wheat. Giant farms, operated with large-scale machinery, became the rule. It was interesting to those from New England or from the Piedmont of Virginia and North Carolina, where farming is done on a small scale, to see six or eight horses pulling a single machine, or a tractor pulling from two to eight plows. While we saw such crops as corn, oats, barley, and flax being grown, it was the wheat that made an indelible impression upon our minds. But we did not stop here. We discussed the reasons for the flat topography and the fine, heavy soils, for the poor drainage, for the short frostless season, for the small amount of rainfall, for the cold, windy winters. Everyone learned the difference between spring wheat and winter wheat, as well as the reasons why only spring wheat is grown in this section. We compared the problems of marketing and transporting wheat from here and from the pampas of Argentina. Then followed a discussion of milling, of the advantages and disadvantages of Minneapolis and Buffalo as milling centers. This discussion went on as we traveled through great sweeps of land golden with wheat, where every railway station, regardless of the size of the town, had from three to five grain elevators. *This was a wheat country!* Can anyone imagine those of our party, who were teachers, handling the spring wheat region this year as they did last?

It should not be thought that we were serious all the time; we were out not only to learn but to have a good time in our learning. In closing, join us at Camp Curry, Yosemite National Park, on the night of July 28th. It is moonlight and thirty-two of us are sprawled out on the valley floor. Burt Harwell, head ranger naturalist, in his enthusiastic and convincing manner, is telling us the physiographic story of Yosemite. *We can visualize it!* El Captain's white gray granite cliff, at whose base we lie, is more beautiful by moonlight than by day. A deer joins us and consumes what candy and gum we have with us; a coyote yelps somewhere in the valley. A mother and three bear cubs come over and eat peaches that we picked that afternoon in the largest peach and apricot orchard in the world—that belonging to Del Monte near Merced. We watch the moon play hide-and-seek with the stately conifers atop the granite cliffs opposite El Captain. Then Harwell, outstanding whistler, whistles "Trees." We dream —not a word is spoken, minutes pass. Then midnight arrives and we are off for our tents. That night will never be forgotten.

WITH THE EDITOR

Geography Teachers Have a National Organization

In January, 1897, Richard E. Dodge, then Professor of Geography in Teachers College, Columbia University, issued the first number of the *Journal of School Geography,* now known as the *Journal of Geography.* The *Journal of Geography,* now beginning its thirty-sixth year of publication, is the only teacher's magazine in the United States devoted entirely to geography. Professor Dodge, Professor R. H. Whitbeck, and Professor George J. Miller have been the editors during this period. The *Journal* served as a unifying agency among geography teachers, and its widening influence was instrumental, in a large measure, for the organization of the National Council of Geography Teachers.

The National Council of Geography Teachers was organized in December, 1915, at Washington, D. C. Professor Dodge was its first president, and Professor Miller was its first secretary, serving until 1929, when he was succeeded by Professor E. E. Lackey. In 1920 the National Council of Geography Teachers became the owner and publisher of the *Journal of Geography.* The publication address of the *Journal* is 3333 Elston Avenue, Chicago, Ill.

Fifteen presidents have served the National Council. In the order of their service they are:

Richard E. Dodge, Albert Perry Brigham, Ray H. Whitbeck, Wallace W. Atwood, R. D. Calkins, Robert M. Brown, W. R. McConnell, A. E. Parkins, Erna Grassmuck, Robert G. Buzzard, Leonard O. Packard, Nels A. Bengtson, De Forest Stull, Douglas C. Ridgley, Zoe A. Thralls.

All are still active workers in the field of geography.

The annual meeting of the National Council is held in December of each year, presenting a two-days' program dealing largely with the organization of geographic material for teaching at the various levels of our public schools and in colleges. At this time the board of directors and executive committee hold meetings at which officers are elected and questions of policy are discussed and determined. State branches of the National Council have been organized in more than thirty states.—D. C. R.

A Proposed Yearbook in Geography

The National Society for the Study of Education publishes each February a Yearbook dealing in a comprehensive manner with one or two subjects of outstanding importance in the educational field. The officers of this Society extended an invitation to the National Council of Geography Teachers in 1929 to coöperate in the preparation and publication of a Yearbook in Geography. A committee was appointed early in 1930 and the work is well under way. It is expected that the Yearbook will be issued by the National Society in February, 1933. The committee has found most cordial coöperation from specialists in education and in geography in the preparation of the volume. The Yearbook will contain numerous articles and committee reports prepared especially for it.

It is interesting to recall that Part II of the first volume of this series of Yearbooks, published in 1902, was devoted to "The Progress of Geography in the Schools." The pamphlet of 58 pages was written by Professor William Morris Davis of Harvard University, published before Geography had found a place as a Department in any American College or University. Professor Davis set forth clearly and comprehensively, with prophetic vision, the place which geography, as a scientific college subject, could

rightfully claim. Thirty-one years later, a span of one generation, the Society plans for another comprehensive presentation of this basic subject in education, at a time when Professor Davis can see his forecast of 1902 taking completed form among numerous institutions of higher learning throughout the land.—D. C. R.

The Teacher's Use of Books Prepared for College and University Classes

While the elementary and junior high school teachers must be thoroughly acquainted with the literature of each school subject especially adapted to the pupils of the elementary and junior high school, they will profit, as progressive teachers, by making frequent excursions into the college literature of the subject of special interest. Geography teachers of the middle and upper grades will obtain inspiration and direction by using as reference books the recent and extensive textbooks of college grade, such as J. Russell Smith's *North America,* Clarence F. Jones' *South America,* Blanchard and Visher's *Economic Geography of Europe,* or Miss Ellen Churchill Semple's more advanced and more specialized book, just published, *Geography of the Mediterranean Region.* By using from time to time such comprehensive and authoritative reference books as these, the teacher obtains a clear and comprehensive geographic concept of regional geography that will broaden and enrich his concept of lands and of peoples and develop more effective teaching. For example, Miss Semple's treatment of "Winter Rains and Summer Drought," pp. 85-93, will yield rich results to the teacher who is teaching Europe, Asia and Africa to pupils in the sixth grade. Her Chapter IX, on "The Eastern Barrier Boundary and Its Breaches," read, with a good atlas for reference, will enable the teacher of Ancient History in the high school to picture the march of peoples and of armies throughout the ages along the circuitous geographic routes that nature laid down for them. Reading by the teacher, of books more advanced than can be used readily by the pupils, enables the teacher to secure that margin of knowledge necessary for effective teaching.—D. C. R.

YOUR SCHOOLS AND MINE

Roy C. Woods, Ph.D.
PROFESSOR OF EDUCATION, MARSHALL COLLEGE
HUNTINGTON, WEST VIRGINIA

AS the first statement from the conductor of this department permit the writer to say that no one realizes better than he the "bigness of the bite he has bitten off to chew."

We have undertaken in this department to serve a genuine need for the teachers in the field and those who might not be teachers but are interested in the general problem of "your schools and mine." We have attempted to make clear that while we will attempt to answer any or all questions addressed to us on these or kindred topics, yet the writer knows he will be unable to give the last word in many questions. To answer all the questions advanced would require the services of a Prophet or Diety. To claim to answer them all would classify one as a soothsayer or a crystal gazer. The former is impossible. The latter is resented. It is to be understood of course that the writer alone is responsible for the answers. Forward your questions to the com-

pany or the above address. They will be cared for in future issues of the journal.—R. C. W.

Has the school the right to use paid advertising in a bond issue campaign, or as a regular means of bringing the needs of the school before the people?

The first part of this question is more generally accepted than the second. If properly looked at, it would appear that any honest and efficient means of publicity is justified and desirable that brings to the public the needs of the school. If a paid advertisement will sell cigarettes, clothing, chewing gum or automobiles it is to be assumed that it will "sell" education. A vigorous advertising campaign has been known to sell less desirable things than education. In fact the large sums of money advanced for advertising leads one to expect returns that are commensurate with the amount of money so expended. In the absence of legal restriction or a board ruling it is hard to see any just reason for not using such means of placing school needs before the public. In fact one sees many reasons for the method.

To what extent have we a right to expect professional and legal requirements for the school janitor?

It does not seem to be so much a question of "have we a right to expect?" as it is "how many and how high may we expect?" since there are but few, if any, school janitors with no preparation and requirements relative to their fitness for the work. It would be hard to answer the question, "Which is more serviceable, the work of the janitor or that of the teacher?" but it is not hard to see that both services are indispensible to an efficient school. The district that has the right to know the qualifications of a teacher of its children has a right to know the qualifications of those who care for the sanitation of the building in which its pupils are taught.

The janitor should know the rules of healthful cleaning; heating; lighting; ventilation; plumbing; etc. Some cities require that the janitors be licensed stationary engineers or graduates of some janitorial training school. There are some schools in which the janitors are more closely connected with and exert a greater influence over the older boys of the upper elementary and secondary school period than do the teachers.

To the extent that the public is willing to pay for better service from the janitor, it is justified in expecting and demanding better professional training and will gradually write such requirements into legal or official form.

Is a falsehood ever defensible?

One's first impulse is to say no and spell it with capital letters. However the word "ever" makes us think again. It seems that in rare cases duty may point to what we sometimes call "white lies." In the case of a serious fire and you found the only exit blocked except the windows and were faced with the necessity of controlling a group of children for 5 to 10 minutes while the ladders were fixed, would you in answer to the child's question relative to the danger tell him the truth or "shade" it a bit? A child is seriously hurt and has an in-

valid mother with a weak heart. Would you tell her the whole truth and nothing but the truth? You say these are rare cases and fortunately they are. Yet it seems that at times we are justified in stopping short of the whole truth and perhaps even making it slightly false. That being the case it is conceivable that there might be times when a pupil will render a false statement and be defensible in our eyes and certainly he may feel so in his own. It all goes back to the philosophy involved in the questions: What was the motive? and, What was the effect on the pupil and on others?

To whom am I responsible in matters of teaching, the principal or the supervisor?

By all means the principal, although the question should not arise. The supervisor should not issue orders. He should assist and have directions in forms of orders come from the executive officer who is the principal. On the other hand, the principal should know that he cannot, and is not expected to be a specialist in all lines. His duties are largely executive. The instructional specialist is the supervisor and the principal should insist, by way of support, on the supervisor's instructions being tried or else he should resume full responsibility, privately and publicly, for the following results in his school. Failing in this the superintendent should give the supervisor the right to refrain from working under conditions so unfavorable to success, and hold the principal responsible.

How many professional organizations should a teacher be expected to join?

No definite answer can be given. Your opinion is as good as mine. I should think the state and national educational associations would be the minimum. In addition one would obtain no inconsiderable benefit from a small expenditure wisely distributed between such organizations as the National Society for the Study of Education or the subsidiary organizations of The National Educational Associations.

What right did my principal have to call us teachers in for a faculty meeting Saturday before school opened this fall? Would it not have been better to use the first Monday following enrollment details, for this meeting?

His right is vested in his office. He is held responsible for the successful opening of his school by the superintendent and has called this meeting to insure success. The last question implies that nothing of importance was accomplished after enrollment. If so it "was a grievous fault of Caesar's" because the first day should not be much different from what you expect each other day to be. Even the details of enrollment must depend upon a faculty meeting in advance. I should not be surprised if in the near future teachers will spend several days in a community prior to the opening of school. This would be an ideal time for a series of teachers meetings where the supervisor could aid interpreting the curriculum and course of study.

Recently I held a "clean-up" day in which the pupils all participated. The parents of one boy objected, saying he did not do a "nigger's" work at home and they didn't intend that he should at school. What should I have done?

In the first place, the boy no doubt needed the type of citizenship training which he would have received from such a cöoperative undertaking. Yet we must not lose sight of the fact that we try to teach obedience to parents. Adult education might have helped in this case. However I am inclined to think that the problem can be solved in a simpler manner. Tell him you are sorry, but that he should mind his parents. Since it is not a vacation day for anyone he will have to take part either in the "clean-up" which his parents refused, or carry on his studies. Assign him a nice long lesson of written work which you can check and still not have to oversee. The fact that "clean-ups" are enjoyed by those participating will soon make the boy feel the loss. He will either bring pressure at home, or the next time be judicious about telling his parents and thus securing their refusal. One offense will be the last for him or for others who might think of trying the same excuse. Do not excuse him from school or school work. Just the two alternatives.

Recently I was told I should not permit pupils to clean erasers. Why?

Chalk dust is irritating to the lungs and has a tendency to aggravate throat, bronchial and lung troubles. Erasers should be cleaned by the janitor in the basement with the vacuum cleaner made for that purpose.

What is the meaning of the term "locus parentis?" I have seen the term in the School Laws of our state.

In short it means "in the position of a parent" and as far as you are concerned it means that anything a parent may do legally with the child you also may do.

My principal has recently posted a ruling which requires me to be in my classroom on Saturdays from 8-12. What right has he to do this? Is it not an infringement upon my rights? What good can possibly come from such a freak ruling?

His right is vested in him by virtue of the office of principal which is that of chief executive in his building in the absence of the superintendent. Unless specifically forbidden by a ruling from the superintendent or the Board of Education I should think no one could question his right.

As to its being an infringement on your rights, I just wonder if you have not the wrong idea of your rights. Does your contract call for twenty days teaching or a month's teaching? If a month, as I think you will find, are you not under duty and obligation for some educational service over the week-end?

I can see several "good things" that might come from such a ruling. For instance, you can get your papers all caught up and graded, have the work for the week planned, do some educational reading, make a study of individual pupil difficulties and develop plans for remedial work, and finally the principal or supervisor will know where to find you if he needs you.

DEPARTMENT OF BOOK REVIEWS

By D. C. R.

The books here briefly reviewed have all appeared during 1931. One book deals with the pedagogy of geography and another with the administrator's interests in geography. Three are textbooks prepared specifically as separate volumes for use in the upper grammar grades and junior high school, two are geographical readers, and one is among the most important contributions to the scientific geographical literature of the world.

Geography in the Elementary School, by *Zoe A. Thralls*, University of Pittsburgh, and *Edwin H. Reeder*, Teachers College, Columbia University. Rand, McNally and Company, pp. 441. Price $2.40.

This volume deals with the fundamental problems of geography teaching, both from the viewpoint of subject matter and of method. The modern concept of geography is clearly set forth with concrete illustrations. The book is so organized as to suggest choice of material year by year and ways and means of teaching geography as the subject unfolds in the successive stages of the elementary school. The methods discussed are illustrated by numerous concrete examples of classroom practice. The book is designed as a textbook for teacher-training institutions and as a handbook for every geography teacher.

Geography for Public School Administrators, by *Edwin H. Reeder*, Teachers College, Columbia University. Bureau of Publications, Teachers College, Columbia University, pp. 100. Price $1.50.

In this little volume, a specialist in education who has an abiding interest in the subject of geography, speaks to his fellow educational specialists who are molding the courses of study in the schools of the nation. The nature of geography and its value as a school subject are set forth. Chapter VI, "Some Controversial Questions," gives helpful answers to the questions: (1) Shall We Combine Geography, History, and Civics? (2) How Many Place Locations Should Be Learned? (3) The Place of the Textbook.

North America by Plane and Train, by *Alison E. Aitchison* and *Marguerite Uttley*, Iowa State Teachers College. The Bobbs-Merrill Company, pp. 404. 96 cents.

Asia, the Great Continent, by *Katheryne Colvin Thomas*, State Teachers Col at Buffalo. The Bobbs-Merrill Company, pp. 412. 96 cents.

These are the first two of a series of geographical readers to deal with the continents. *North America by Plane and Train* presents in interesting detail a number of large and important geographical units selected from the various regions of the conntinent. Twenty-three chapters are given to the United States and Alaska; three to Canada, and three to tropical North America. The type studies selected are significant geographic units of human interest. Farmers of the Corn and Livestock Belt; Mountain Mining Camps; Central American Banana Plantations, are representative chapter headings.

Asia, the Great Continent is approached through a graphic description of "The Journey of Marco Polo." In Chapter II the reader is given the key to the organization of the book. Many chapter titles carry items of human interest, e. g.: "The Stay-at-home People of Sinkiang"; "The Neighbor from Whom We Buy Silk"; "Letters from Peiping"; "Pilgrims to Mecca"; "Looking Back at Asia." Frequent comparison and contrast of Asiatic and American conditions develop appreciation for the peoples and their homelands.

These two volumes are sure to find favor among teachers and pupils. Later volumes of the series will be eagerly awaited.

Our World Today, by *De Forest Stull*, Teachers College, Columbia University, and *Roy W. Hatch*, State Teachers College, Montclair, New Jersey. Allynn & Bacon, pp. 721. Price $2.00.

This geography in one large volume treats the continents and countries of the world. The authors state: "*Our World Today* is a simple, direct story of human geography. . . . It is a geography in the true sense, but links its story with history and the other social studies wherever such correlation vivifies for the pupil the topic under consideration. It seeks to present a sensible mean between the restricted science of the physiographer and the confusing incongruities of certain fusion courses."

The order of treatment and the relative amount of space given to the various continents differ radically from other American textbooks. The first half of the volume deals with Europe and European possessions. The last fourth of the volume deals with the United States and its possessions. Maps, graphs, and pictures are abundant and appropriate. The organization and treatment offer a valuable textbook for junior high school geography and an excellent reference book for all geography classrooms.

World Geography, by *A. W. Abrams*, Director of the Visual Instruction Division, State Education Department, Albany, New York, and *E. L. Thurston*, formerly Superintendent of Schools, Washington, D. C. Iroquois Publishing Company, pp. 317. Price $1.60.

The authors state: "The aim of *World Geography* is to organize the child's geographic knowledge from a world point of view. Having studied his own and other countries in the earlier grades, he is now prepared to understand geographic facts and principles in their world-wide application and significance."

The fourteen chapter headings are the fourteen main divisions of the new seventh grade syllabus in geography for New York State. While the volume is thus linked definitely with a state course of study, both the course and the volume are suitable for junior high school use anywhere. Maps, graphs, and pictures are abundant.

The World at Work, by *Wallace W. Atwood*, Clark University. Ginn and Company, pp. 344. Price $1.60.

This is the fifth and last of a series of geographies designed to cover the work of the elementary school and junior high school. *The World at Work* presents geography from the world point of view suitable to junior high school pupils by a study of climate, pasture lands, great forests, farming regions, fisheries, mining, building, manufacturing, trade and transportation, means of communnication, distribution of peoples, and the earth as a planet. Maps, graphs, and pictures are abundant. By the treatment of large world units comparative studies among the various nations and regions of the world are developed as a matter of course and the interdependence of peoples is readily appreciated.

The Geography of the Mediterranean Region, by *Ellen Churchill Semple*, Clark University. Holt and Company, pp. 737. Price $4.00.

This volume constitutes a most notable contribution to the science of geography. It will be welcomed by advanced students and teachers of geography throughout the world as an interpretation, in terms of the science of geography, of one of the world's most interesting geographic and historic regions. Miss Semple states: "The preparation of this book has involved twenty years of research and numerous journeys to the Mediterranean for field work, in the course of which I visited nearly all parts of the coasts and their immediate hinterland." More than two thousand specific citations to authorities, from the most ancient to the most recent records in numerous languages, indicate the thoroughness of the research on which this monumental work is based. The scholarly organization and treatment of the theme, the clearness and beauty of the language, and the scientific viewpoint of modern geographic interpretation running through the volume give to scholars, students, teachers, and intelligent readers a book of outstanding value in the fields of geography and history. The book should find a place in every college and high school library and in all large public libraries.

NEW EDUCATIONAL BOOKS

We acknowledge receipt of the following publications of interest to the readers of EDUCATION. Mention here does not preclude review in this or subsequent numbers of EDUCATION.

A Practical Reader for Adults, Book I. By *Josephine Dwight Mason*, Director of Evening Schools and Immigrant Education, Springfield, Mass., and *Gertrude E. O'Brien*, Teacher, Elementary Schools and Illiterate Adults, Springfield, Mass. Illustrated by Margo Sylvester. 1931. D. C. Heath & Company, 137 pp., 72 cents. Book II, 157 pp., 76 cents.

Debating. Compiled and edited by *Raymond F. Howes*, M.A., Assistant Professor of English, Washington University. 1931. D. C. Heath & Co., 182 pp., $1.00.

Secondary School Administration. By *James B. Edmonson*, Dean of the School of Education, University of Michigan, *Joseph Roemer*, Professor of Secondary Education and Director of Instruction in the Junior College and Demonstration School, George Peabody College for Teachers, and *Francis L. Bacon*, Principal Evanston Township High School, Evanston, Illinois. 1931. The Macmillan Company, 483 pp., $2.25.

Condensed Rules for English Composition. By *M. E. Gray*, Teacher of English, Galileo High School, San Francisco, California. 41 pp., paper covers. The Gregg Publishing Company. 25 cents.

Transcription Drills. By *J. Walter Ross*, B.S. in Econ., South Hills High School, Pittsburgh, Pa. The Gregg Publishing Co., 178 pp., $1.20.

Gregg Shorthand, Junior Manual. By *John Robert Gregg*. Anniversary edition. The Gregg Publishing Company, 202 pp., $1.50.

General Business Science, Part III. By *Lloyd L. Jones*, B.B.A., A.B., and *James L. Holtsclaw*, A.B., Director of Commercial Education, Detroit, Michigan. The Gregg Publishing Company, 1931, $1.00.

Understanding Advertising. By *Raymond Hawley* and *James Barton Zabin*. The Gregg Publishing Company, 1931, 150 pp., $1.20.

Gregg Typing—Techniques and Projects, Complete Course. By *Rupert P. SoRelle* and *Harold H. Smith*. 1931. The Gregg Publishing Company. $1.50.

A Child's Third Number Book, Part Two. By *Saul Badanes*. The Macmillan Co., 1931, 141 pp., 64 cents.

Supervision in the Secondary School. By *H. B. Alberty*, Associate Professor of Principles and Practice of Education, The Ohio State University, and *V. T. Thayer*, Educational Director of the Ethical Culture Schools, New York City. D. C. Heath & Company, 1931, 271 pp., price $2.00.

The Reading Abilities of College Students. By *Alvin C. Eurich*, Assistant Professor of Educational Psychology and Assistant Director, Bureau of Educational Research, University of Minnesota. 1931. The University of Minnesota Press, Minneapolis, 208 pp., $2.50.

The Poems of Catullus. Arranged and edited by *W. B. McDaniel, 2nd*, Washington Square College, New York University. Oxford University Press, 1931, 195 pp.

Essentials of Correctness in the Use of English. By *Alton C. Morris* and *Herman E. Spivey*, Department of English, University of Florida. 1931. Prentice-Hall, Inc. Papers covers, 80 cents.

The Integration of Teaching (A Work-Book for Teachers from the Kindergarten to the Senior College). By *Samuel Quigley*, Associate Professor of Education, Extension Division of the University of Texas. 1931. Edwards Brothers, Inc., Ann Arbor, Mich. 198 pp., paper covers.

The Clarendon Latin Course. A Four-year Course for Schools. By *Arthur Clendon*, M.A., Head Master of Handsworth Grammar School, and *J. A. Vince*, M.A., Late Assistant Master at Bradford College. 1931. Oxford University Press. 288 pp. $1.25.

Creative Moments in Education. A documentary interpretation of the history of Education. By *Joseph K. Hart*, Vanderbilt University. 1931. Henry Holt & Company. 476 pp. $3.00.

Tales of Old. A Second Book for Adult Beginners. By *Jeanetta Wrottenberg Bachrach*, Teacher of Immigrant Adults in the Los Angeles City Schools. Illustrated by Charles W. Robinson. F. A. Owen Co. 1931. 80 pp. bound in linen. 48 cents.

Our Clothing. By *Josephine Worthington*, formerly teacher in the Public Schools of Rochester, N. Y., and *Catherine Victoria Matthews*, Specialist in Geography, Schools of Rochester, N. Y., Demonstrator in Geography, Summer Session, Teachers College, Columbia University. 1931. F. A. Owen Co. Illustrated, 256 pp. 96 cents.

Modernized Teaching in Rural Schools. By *U. J. Hoffman*, for twelve years County Superintendent of Schools and for twenty-four years State Supervisor of Rural Schools in Illinois, with a chapter on A Physical Education and Health Program, by *Louis Kulcinski*, State Supervisor of Physical Education, Illinois. 1931. 144 pp. F. A. Owen Company.